DICK SMITH ELECTRONICS

That's where you go!

DICK SMITH ELECTRONICS
SHOP 19 MAX MURRAY MALL
20 GORDON STREET
COFFS HARBOUR, NSW, 2450
PH: 02 6651-8055

catalogue

COMPUTER • COMMUNICATION • ENTERTAINMENT • ELECTRONICS

$2

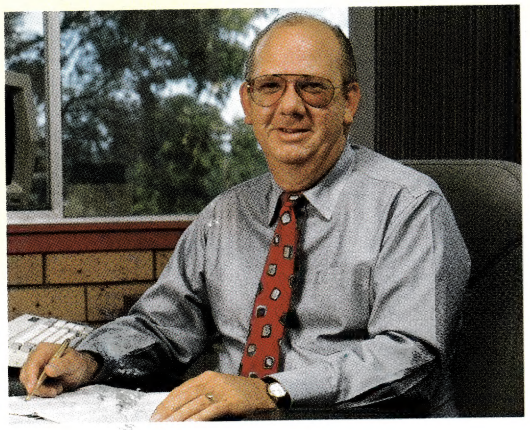
VISIT OUR WEBSITE: http://www.dse.com.au

1999~2000

1999 – 2000 Catalogue

DICK SMITH ELECTRONICS

That's where you go!



Dear customer,

I am pleased to introduce to you our newest Annual Catalogue for 1999/2000.

Dick Smith Electronics has been producing the Annual Catalogue for close to 30 years, providing consumers with an easy-to-read reference for our products.

Each year we work on updating information and pricing as a guide for our customers and their choices. The look of our Catalogue has changed dramatically over the years and has moved inline with the turn of the century.

This year's Catalogue has a contemporary and modern feel to take us into the new millennium. We have used the same colour category scheme as last year, so customers will find it easy to identify the four main areas – Communications, Computers, Entertainment and Electronics.

The contents of this year's Catalogue, are once again available on the Internet and you can access this via our web address. Since our Internet site was first launched some time ago, we have been refining it to make it more user-friendly and informative for people who access it.

Over the past year, Dick Smith Electronics has continued to grow. Since our last Catalogue, we have opened many new stores including three new 'PowerHouses' – our very large format stores.

We anticipate this growth will continue into the next millennium with both regular and 'PowerHouse' stores.

I would like to take this opportunity to thank you for shopping with Dick Smith Electronics and I trust we may continue to earn your ongoing support.

Kind regards,

Jeff Grover
Managing Director

OVER 175 STORES & STOCKISTS THROUGHOUT AUSTRALASIA

See our detailed list on page 6 & 7 for your closest store or stockist

Humble Beginnings to Now

From being a small company in rented premises in Sydney, to becoming a household name throughout Australasia, Dick Smith Electronics has grown extensively over the past 30 years. Not just in terms of size – our range has expanded to incorporate communications, computers and entertainment as well as electronics.

Where We Are Now

We have many stores, authorised stockists and franchisees throughout Australia and New Zealand with more planned for the future. This means that you are never far from a Dick Smith Electronics store. So when you need an electronic solution to a problem, you know you don't have far to go.

Superior Service

We provide what we believe, to be the most comprehensive service in Australasia. Our ongoing commitment to be the best in customer service, our constant search for new products, a comprehensive library of technical information and our own team of in-house specialists all work together to keep us ahead of our competitors. With our computer support hotline and expert staff throughout Australia and New Zealand, we can answer any questions you may have.

Research Development and Quality Control

At Dick Smith Electronics our Engineering Department tests new products for performance and legal compliance before we consider introducing them to our range. Often we redesign goods to ensure safer standards. Likewise, our Quality Control procedures ensure our products meet the latest legal and technical requirements. Thanks to our staff's commitment to ensuring all products meet stringent safety standards, you can be confident you are buying safe and reliable products from Dick Smith Electronics.

The New Look

Following the success of our original PowerHouse in Sydney in 1996 – enabling customers to try before they buy – we have opened another two PowerHouses in Sydney, one in Victoria and more are on the way! Customers are invited to see and hear their home theatre choices, play a computer game, surf the Internet or see DVD in action. There are televisions, hi-fi systems and mobile phones set up for you to use! Dick Smith Electronics PowerHouses focus on the convergence of technology and contain on-site technical services, a fitting bay for car stereos & mobile phones and a store full of knowledgeable & helpful staff.

For important consumer information regarding prices and stock availability, please refer to the inside back cover of this catalogue.

Prices shown as underlined in our catalogue attract wholesale sales tax at the highest current marginal rate.

Legislation, which is now before the Australian Parliament, if passed, may alter this rate from July 1st 1999. Should this occur, Dick Smith Electronics will pass on the savings in Sales Tax it receives to our customers.

The prices quoted in this catalogue will be valid from May 1 to September 1, 1999

Communications
Pages 8 to 23

Telephones	8-13
Telephone Accessories	14-16
Intercoms, Laminators & Shredders	17
Faxes	18-19
Mobile Phones & Accessories	20-23
Radio Communications	See Electronics

Computers
Pages 24 to 52

Computers	24-25
Software	26-27
Computer Peripherals & Accessories	26-46
Modems, Scanners & Printers	20, 30, 31
Calculators & Organisers	47-51
Personal Digital Assistants (PDAs)	51-52

Entertainment
Pages 53 to 86

Clock Radios	53, 78
Audio	54-58
Notetakers	59-61
Car Audio	62-63
Audio Accessories	58, 63-65, 68-77
Speakers	64, 72-73
TV & Accessories	64-65, 67, 71, 89-90
Digital Cameras	29, 66
Toys & Learning	78-81
Gadgets, Gifts, Clocks & Health Products	82-86

Electronics
Pages 87 to 232

Electrical	87-113
Security	92-100
Radio Communications	114-140
Kits	141-158
Tools & Accessories	159-175
Test Equipment	176-189
Solar Panels	190-191
Books	192-198
Components	199-232

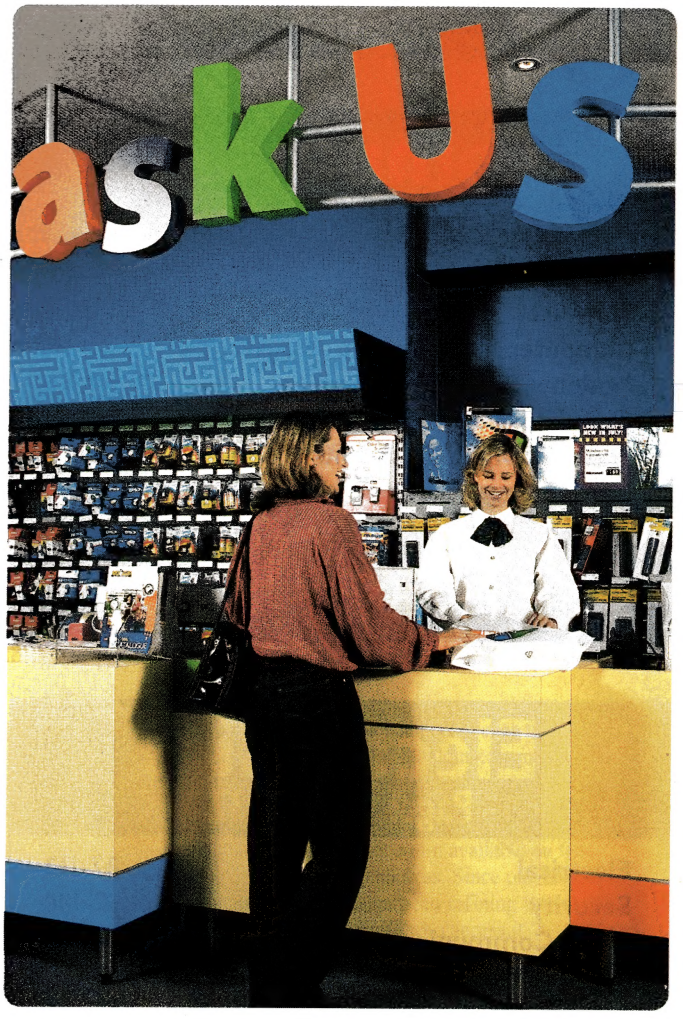
● Technical Data 233-254 ● Index 255-256 ● Store Locations & Stockists 6-7

What's in store for you!

DICK SMITH ELECTRONICS

That's where you go!

Our products are grouped into colour-coded categories, making them very easy to find. Simply look up the category of the items you are seeking in the contents page and follow the colour page headers that identify the section. For a more detailed index, turn to the back of this catalogue.



Warranty Refund and Exchange

Shop with confidence with our 7-day money-back guarantee (14 days with mail order purchases). For "change of mind" purchases, goods can only be accepted for refund or exchange in unmarked, original condition complete with all packaging, instruction books and accessories. Freight costs will be deducted from the amount for credit. Where goods are returned for warranty refund, a refund in full will apply. (Please note: refunds on "change of mind" purchases do not apply to books, batteries, semi-conductors, video games or computer software.)

All return warranty repairs must be accompanied by your sales docket.

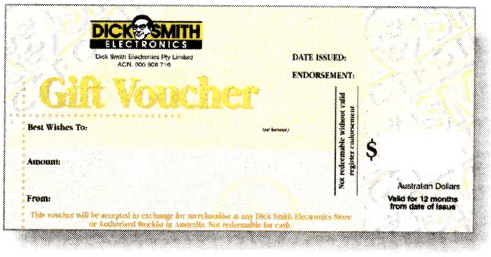
Lay-By

For your convenience lay-by is available at all our company-owned stores. Simply leave as little as 10% deposit and you may take up to three months to pay the balance remaining. No account fees apply.

LAY-BY AVAILABLE

We accept...

MasterCard · Diners Club International · bankcard · VISA · eftpos Participating Cards Welcome Here · AMERICAN EXPRESS



Gift Vouchers

If there are simply too many great gift ideas in this catalogue for you to choose from, purchase a Gift Voucher instead. Gift Vouchers are redeemable at any Dick Smith Electronics store or stockist in Australia and can be printed to suit the dollar value of your choice.

Finance

For those requiring delayed or partial payments, Dick Smith Electronics offers RentSmart and AVCO finance services in-store. See page 5 for more details.

RentSmart *It's smarter business to rent.* · Avco WE PUT PEOPLE FIRST

For important consumer information regarding prices and stock availability, please refer to the previous pages and the inside back cover of this catalogue.

Welcome

Welcome to the PowerHouse, Dick Smith Electronics' really really big store! With four PowerHouses already in Australia and more to come, Dick Smith Electronics offers you a fun and exciting range of powerful products where you can try before you buy!

Entertainment

Want a super range of audio and video, including TVs, stereos, VCRs, home theatre packages, digital cameras and DVD, the latest in technology? To make educated choices, come to our PowerHouse sound rooms and try before you buy.

Music

We have one of the largest ranges of CDs, videos and DVDs in Australia. Choose from our superior selection of singles and CD titles, new and classic videos, the latest in DVD and note our very competitive prices. See and hear your choices at our many listening and viewing posts. PowerHouse has an entertainment solution for you!

Computers

We offer a huge selection of top brand computers & notebooks plus scanners, printers, modems & accessories. You can even have a PC built-to-order. Looking for a software solution? PowerHouse has a sensational range of educational games and productivity titles to suit anyone – from kids to grandmas. If you want to try the Internet, why not surf at our Internet bar.

Communications

One-stop shopping for all your phone, fax, caller ID and answering machine needs. Visit our Telstra MobileNet 'store-within-a-store' for mobiles, accessories and the best plans to suit you. Why not select from our UHF, CB and Ham/radio range?

Electronics

Our extended range of electronic tools, test equipment, kits, home security and technical reference library is second to none. We have electronic solutions to your problems and technical service assistance is available in-store for all your needs.

Visit us at one of these locations... More Opening Soon

Bankstown	Moore Park	Penrith	Carnegie
Cnr Chapel & Cantebury Roads Bankstown, NSW	Cnr South Dowling St & Todman Ave Moore Park, NSW	Cnr Batt St & Mulgoa Rd Penrith, NSW	1048-1054 Dandenong Rd Carnegie, VIC
02-9793 9677	02-9697 0244	02-4721 1544	03-9569 2644

Other Ways to Shop

Educational/Commercial Orders and Enquiries

If you're an educational institution, Government department, reseller or commercial business and wish to purchase in bulk quantities look no further. For volume pricing call our call centre where our experienced sales staff are ready to receive your order. We offer a focused and highly trained team dedicated to servicing your needs, whether they are of a business, manufacturing or educational nature.

Corporate Business Orders and Enquiries

For the corporate business looking for specialised service in equipment solutions, we have corporate account managers and wholesale territory managers with vast experience in business office products, including computers, fax machines, printers, paper, toner/cartridges, mobile phones and more.

International Customer Enquiries

Why not take advantage of the service provided by our call centre and contact our sales team regarding the Dick Smith Electronics range. Efficient and easy-to-use, this service offers worldwide access to a vast range of products.

Direct Link and Mail Order

A quick and convenient way to access the Dick Smith Electronics Home Shopping service. Through Direct Link, you can buy anything from the entire range in all our stores. Set up for the specific purpose of handling mail order customers throughout Australia and overseas. Direct Link despatches most items within 24 hours of ordering.

For leading brands and an extensive range, including the Dick Smith Electronics PowerHouse range call us today.

Orders and Enquiries
1300 366 644 – 24 hours a day (toll free within Australia)
Outside Australia +61 2 9395 1100

Facsimile
(02) 9395 1155 – 24 hours a day
Outside Australia +61 2 9395 1155

Mail Orders
Reply Paid 160, PO Box 321
North Ryde NSW 1670
(no postage stamp required)

email: directlink@dse.com.au

This symbol indicates products are only available at PowerHouse stores or via Direct Link mail order.

EXCLUSIVE TO PowerHouse & direct link

Your order is processed immediately

Once you've given us your payment details, our computerised order fulfilment service does the rest. Just use the payment method most convenient for you.

We accept:

- All major credit cards: Bankcard, MasterCard, Visa, American Express, Diners Club and New Zealand and Papua New Guinea Bankcard & Visa.
- Cheques in $AUD.
- Money orders in $AUD.
- Bank Drafts in $AUD.
- Accounts: Many wholesale customers and Government departments have discovered the convenience of opening an account with us. Please telephone us for details.

We'll freight it to you any way you wish

Postal
Australia Post will deliver your parcel promptly at a very reasonable cost.

Road Freight
Delivery anywhere in Australia within a few days.

Air Freight
Fast and efficient! We'll even air-freight your purchases overseas.

Courier
We can arrange couriers (price on application) for customers who simply can't wait.

Please note: Any of the following goods are considered dangerous and cannot be sent by air-freight or Australia Post:

- All caustic solutions (i.e. ferric chloride, photo etches, etc)
- Aerosol pressure packs (i.e. anything flammable, gas refills, cleaning sprays, etc)
- Pressurised goods ("screech" alarms, butane-powered soldering irons, etc)

When ordering, please specify road freight for these items.

DICK SMITH ELECTRONICS direct link

Satisfaction Guaranteed!

When you order through Dick Smith Electronics' Direct Link, you can be assured you're being looked after by a team of professionals.

14-DAY MONEY-BACK GUARANTEE

For "Change of Mind" purchases, goods can only be accepted for refund or exchange in unmarked, original condition and packaging, complete with all instruction books, accessories, etc. All returns and warranty repairs must be accompanied by your Sales Docket.

Automatic Back Orders

Out-of-stock lines over $10 are automatically placed on back order for later delivery. Or, if you prefer, we'll refund pre-paid orders.

Mailing List

Most of our customers like to be placed on our mailing list so they can keep up with all the fantastic special offers during the year. If you'd rather not receive these please let us know.

Sales Tax Exemptions

Sales tax exemptions are available to customers when an approved exemption certificate is supplied with an order.

Please Note: Refunds on "Change of Mind" purchases does not apply to Books, Batteries, Semi-conductors, Video games, Computer Software or contracted Mobile Phones.

Let your keyboard do the Shopping

Every product in this catalogue is available on the Internet. Simply go to our website, **www.dse.com.au** and browse our "store". It's the same reliable "Direct Link" service and delivery we've had for nearly 30 years, but there are new products added regularly. And it's safe! Our secure server ensures your credit card details are seen by no one else.

Buying is easy

Once you've browsed our on-line "store" and are ready to buy, you need to register. Click on "register", enter your name, address and read the conditions. Browse our store until you find your product. Click on the "tick" box to select it, or the hyperlink for more product details, then click the button "Add to shopping" or "Add all selected items to my shopping bag". You'll find yourself at your shopping bag. At this stage you can easily change or cancel your order.

Credit Card safe

Next, click on "Place an Order". To order over the Internet, on the next screen click on "Prepare Online Order" at the bottom. This takes you onto a "secure" page which means your credit card details will be safe when you enter your details. Follow the instructions from here to complete your order.

We accept...

MasterCard · Diners Club International · bankcard · VISA · eftpos Participating Cards Welcome Here · AMERICAN EXPRESS

Three Decades of despatch

Once your order is placed, your goods are processed through our Direct Link despatch system. With nearly 30 years experience, we have fine-tuned and refined our delivery service so that your orders are processed efficiently. Try our mail order service for the speedy delivery of your purchases. Contact us on-line at:

directlink@dse.com.au or **feedback@dse.com.au**

RENT THE EASY WAY WITH RENTSMART

RentSmart is the easy and affordable alternative to get all the office equipment and computers you need today without paying out thousands of dollars now and over-extending your cash flow.

Who can Rent?

All sorts of business people can RentSmart. All you need is a 2-year trading history, a good credit rating and a credit approval by RentSmart.

Why Rent?

By renting everything your business needs, you save money that can be used for more profitable gain for you.

You're able to spread your costs by making monthly payments over the useful life of your equipment and it allows you to bundle all your business equipment into one convenient plan. It's also tax deductible.

RentSmart gives you the ability to update to the latest technology and add new equipment when you need to**

Approval for your plan can be made within 24 hours and you can apply to RentSmart at any Dick Smith Electronics or PowerHouse store.

** Conditions and additional rental charges may apply.

EASY SHOPPING WITH INTEREST FREE FINANCE

When shopping at Dick Smith Electronics stores, it's easy to find a lot of products that you want to put on your shopping list. For those customers who spend over $500 and require delayed or partial payments, we have an interest free finance scheme perfect for you!

Pay nothing, interest free, until 6 months after initial purchase. There's no deposit and we'll only charge interest when payments are in default.

Available at all Dick Smith Electronics and PowerHouse stores to approved in-store purchasers only.

NO DEPOSIT INTEREST FREE FINANCE*

*Offer available on any purchase over $500 to approved purchasers only. Payment due 6 months after the sale date with no interest added. Interest may be charged when payments are in default. Offer available to in-store customers only.

RentSmart *It's smarter business to rent.*

Avco WE PUT PEOPLE FIRST

Store Locations

New South Wales

		TELEPHONE	FACSIMILE
Albury	455 Kiewa Street	(02) 6021 8399	(02) 6021 2344
Bankstown	T54 Level Bankstown Square	(02) 9707 4888	(02) 9708 2401
Bankstown	PowerHouse, The Christie Centre, Cnr Chapel & Canterbury Roads	(02) 9793 9677	(02) 9793 7917
Blacktown	Shop 1 & 2, 9 Patrick Street	(02) 9671 7722	(02) 9831 6218
Bondi Junction	Cnr Ebley & Ann Street	(02) 9387 1444	(02) 9369 2894
Brookvale	Shop 2, 1B Cross St, Warringah Mall	(02) 9905 0441	(02) 9938 3475
Broadway	Shop 209, Level 2, Broadway Shopping Centre	(02) 9211 3777	(02) 9212 6709
Burwood	69 Burwood Road,	(02) 9744 7299	(02) 9744 7369
Campbelltown	Shop U36a Macarthur Square, Gilchrist Drive	(02) 4627 2199	(02) 4627 2250
Castle Hill	Shop 126 Castle Mall, McDougall Lane	(02) 9894 4633	(02) 9894 4617
Chatswood	411 Victoria Avenue,	(02) 9411 1955	(02) 9412 1695
Chullora	147 Hume Highway	(02) 9642 8922	(02) 9642 3184
Gore Hill	164 Pacific Highway	(02) 9439 5311	(02) 9439 3787
Gosford	Cnr Erina & Henry Parry Drive	(02) 4325 0235	(02) 4324 6454
Hornsby	17-19 Florence Street	(02) 9477 6633	(02) 9477 2481
Hurstville	124 Forest Road	(02) 9580 8622	(02) 9580 8862
Kotara	82 Park Avenue (opposite Garden City Shopping Centre)	(02) 4956 2092	(02) 4956 2096
Liverpool	Cnr Elizabeth Drive & George Street	(02) 9600 9888	(02) 9600 9637
Maitland	Cnr Church & High Street	(02) 4933 7866	(02) 4933 3977
Miranda	Shop 2033 Westfield Shoppingtown, 621 The Kingsway	(02) 9525 2722	(02) 9525 6048
Moore Park	PowerHouse, cnr South Dowling Street & Todman Avenue	(02) 9697 0244	(02) 9697 3004
Newcastle	173 Maitland Road, Tighes Hill	(02) 4961 1896	(02) 4962 5948
North Ryde	(Showrooom) Cnr Lane Cove & Waterloo Roads	(02) 9937 3355	(02) 9887 4907
North Sydney	66 Berry Street	(02) 9964 9468	(02) 9964 9475
Nowra	38 Berry Street	(02) 4422 5522	(02) 4422 5525
Orange	217 Summer Street	(02) 6361 8400	(02) 6361 8337
Parramatta	37 George Street	(02) 9689 2188	(02) 9687 2583
Penrith	Cnr Henry & Riley Streets	(02) 4732 3400	(02) 4732 3393
Penrith	PowerHouse, cnr Batt St/Mulgoa Road	(02) 4721 1544	(02) 4721 7655
Rockdale	Shop M2, Top Level, Rockdale Plaza, Princes Highway	(02) 9588 9309	(02) 9588 9314
Sydney (City)	Shop 412, Mid City Centre, George Street	(02) 9221 0000	(02) 9221 0015
Sydney (City)	125 York Street	(02) 9267 9111	(02) 9264 2922
Tamworth	13 White Street	(02) 6766 1711	(02) 6766 7139
Tweed Heads	cnr Traders Way & Greenway Drive	(07) 5523 1766	(07) 5523 1207
Wollongong	263 Keira Street	(02) 4228 3800	(02) 4228 0337

Australian Capital Territory

		TELEPHONE	FACSIMILE
Belconnen	5 Chandler Street	(02) 6253 1785	(02) 6253 1663
Fyshwick	Cnr. Albany/Townsville Streets	(02) 6280 4944	(02) 6280 5352
Tuggeranong	Shop 25, Homeworld Centre, Soward Way	(02) 6293 3399	(02) 6293 3322

Victoria

		TELEPHONE	FACSIMILE
Altona Gate	Shop L32, Altona Gate S/C, Millers Road,	(03) 9314 6611	(03) 9314 0588
Ballarat	Shop 14, Norwich Plaza, Cnr Curtis/Grenville Streets	(03) 5331 5433	(03) 5331 3809
Bendigo	Shop 42, Bendigo Marketplace, Railway Place	(03) 5443 0388	(03) 5443 2158
Box Hill	Shop 46, White Horse Plaza	(03) 9890 0699	(03) 9890 1635
Brighton	Cnr Hawthorn & Nepean Highway	(03) 9592 2366	(03) 9592 7908
Coburg	260 Sydney Road	(03) 9383 4455	(03) 9383 5327
Carnegie	1048-1054 Dandenong Road	(03) 9569 2644	(03) 9569 2655
Dandenong	266-270 Lonsdale Street	(03) 9794 9377	(03) 9792 0433
Frankston	70 Wells Street	(03) 9783 9144	(03) 9783 7632
Geelong	100-104 Market Square Shopping Centre, Malop Street	(03) 5223 2711	(03) 5221 1015
Greensborough	Shop 2, 16-22 Main Street	(03) 9432 5125	(03) 9432 5126
Highpoint	Shop 41B, Level 2, Highpoint City Shopping Centre	(03) 9318 6300	(03) 9318 4419
Knox Towerpoint	425 Burwood Highway, Wantirna South	(03) 9800 3455	(03) 9800 3475
Melbourne (City)	Strand Central Arcade, Corner Lonsdale & Elizabeth Street	(03) 9663 5320	(03) 9639 0185
Melbourne (City)	Basement, Shop 2, cnr Bourke & Swanston Streets	(03) 9639 0396	(03) 9639 0253
Mentone	6-10 Nepean Highway	(03) 9585 5455	(03) 9585 5466
Niddrie	360 Keilor Road	(03) 9379 7444	(03) 9379 1320
Northland	Shop C15/16, Northland Shopping Centre, Murray Rd, Preston	(03) 9471 4823	(03) 9471 4825
Richmond	Cnr Bridge Road & Boulevarde	(03) 9428 1614	(03) 9428 1688
Ringwood	94 Maroondah Highway	(03) 9879 5338	(03) 9870 5432
Shepparton	274 Maude Street	(03) 5821 9888	(03) 5831 6655
Springvale	Springvale & Dandenong Roads	(03) 9547 0522	(03) 9546 2879

Queensland

		TELEPHONE	FACSIMILE
Booval	160 Brisbane Road	(07) 3282 6200	(07) 3282 3197
Brisbane (City)	157 Elizabeth Street	(07) 3229 9377	(07) 3221 4118
Buranda	170 Logan Road	(07) 3391 6233	(07) 3891 1717
Cairns	201 Mulgrave Road	(07) 4031 1515	(07) 4031 7977
Capalaba	Shop 106, Capalaba Park Shopping Centre, Redland Bay Rd	(07) 3245 2870	(07) 3245 2865
Chermside	Cnr Gympie & Hamilton Roads	(07) 3359 6255	(07) 3359 6905
Indooroopilly	272 Moggill Road	(07) 3878 4944	(07) 3878 4337
Maroochydore	161-165 Horton & Cornmeal Parades	(07) 5479 1800	(07) 5479 1802
Mermaid Beach	2560 Gold Coast Highway	(07) 5578 5600	(07) 5578 5190
Mitchelton	71 Osborne Road	(07) 3355 2642	(07) 3355 3497
Morayfield	135 Morayfield Road	(07) 5428 0241	(07) 5428 0243
Rockhampton	Queen Elizabeth Drive	(07) 4927 9644	(07) 4927 9609
Southport	cnr Nerang/Scarborough Streets	(07) 5532 9033	(07) 5591 1885
Toowoomba	Cnr Bowen & Ruthven Streets	(07) 4638 4300	(07) 4632 3578
Townsville	Cnr Kings Rd & Woolcock Street	(07) 4772 5722	(07) 4772 7316
Tweed Heads	cnr Traders Way & Greenway Drive	(07) 5523 1766	(07) 5523 1207
Underwood	Shops 10,11,12 & 16, 3245 Logan Road	(07) 3341 0844	(07) 3341 0894

South Australia

		TELEPHONE	FACSIMILE
Adelaide City	252 Pulteney Street	(08) 8232 1200	(08) 8223 4299
Adelaide City	Myer Centre, Food Court, Terrace Level	(08) 8231 7775	(08) 8231 7787
Elizabeth	Shop 2, 47-49 Elizabeth Way	(08) 8255 6099	(08) 8255 4695
Enfield	435 Main North Road	(08) 8260 6088	(08) 8349 5550
Modbury	985 North East Road	(08) 8395 7777	(08) 8395 7888
St Marys	1267 South Road	(08) 8277 8977	(08) 8277 9954
Westlakes	137-139 Brebner Drive	(08) 8235 1244	(08) 8235 1370

Western Australia

Balcatta	Unit 2, Cnr Gibberd & Erindale Roads	(08) 9240 1911	(08) 9240 1912
Cannington	Cnr Wharf St & Albany Highway	(08) 9451 8666	(08) 9458 7018
Fremantle	66 Adelaide Street	(08) 9335 9733	(08) 9430 4017
Kalgoorlie	34a Wilson Street	(08) 9091 8550	(08) 9091 8560
Mandurah	Unit 1, 318 Pinjarra Road	(08) 9586 9666	(08) 9586 9777
Midland	Cnr Victoria Parade & Great Eastern Highway, Midvale	(08) 9250 1460	(08) 9250 1449
Morley	269 Walter Road	(08) 9375 8660	(08) 9375 8661
Perth City	Raine Sq, 125 William Street	(08) 9481 3261	(08) 9481 0458
Rockingham	cnr Read Street & Commodore Drive	(08) 9592 2888	(08) 9592 1019
Osborne Park	Gateway Central, Shop T2, 389 Scarborough Beach Road	(08) 9444 6555	(08) 9444 9506

Tasmania

		TELEPHONE	FACSIMILE
Glenorchy	371d Main Road	(03) 6273 2176	(03) 6272 6887
Hobart	101 Collins Street	(03) 6231 0800	(03) 6234 6416
Launceston	5 The Kingsway	(03) 6334 4555	(03) 6331 7608
Rosny Park	Shop U52-U56, Eastlands Shopping Centre, Bligh Street	(03) 6244 2555	(03) 6244 2600

Northern Territory

		TELEPHONE	FACSIMILE
Darwin	47 Stuart Highway	(08) 8981 1977	(08) 8981 6496

Underlined – Franchise Operated Store

New South Wales

Batemans Bay	Smiths Music, Shop 1, Blandford Plaza, Cnr Orient and North Streets	(02) 4472 5030
Bowral	Bowral Electrical Supplies, 28 Station Street	(02) 4861 1861
Broken Hill	Hobbies & Electronics, 197-199 Argent Street	(08) 8088 4098
Cootamundra	Cootamundra Music & Lite, 264 Parker Street	(02) 6942 2561
Deneliquin	Deni Electronics, 220 Cressy Street	(03) 5881 3672
Dubbo	Livewire Audio & Electronics, 106-108 Talbragar St.	(02) 6884 5200
Forster	Powerpoint Electronics, Forster Tower, Wallis Street	(02) 6554 5006
Goulburn	Goulburn Electronics, 90 Auburn Street	(02) 4821 6655
Griffith	Miatronics, Shop 2, 423 Banna Avenue	(02) 6962 4534
Kempsey	Scott Coy Electronics, Shop 1, 52 Forth Street	(02) 6562 4395
Leeton	Leeton Audiotronics, 93 Pine Avenue	(02) 6953 2800
Murwillumbah	Murwillumbah Communications, 82 Main St.	(02) 6672 3684
Port Macquarie	Port Maquarie Electronics, Clarence Street	(02) 6583 9322
Young	Donges Electronics Pty Ltd, 186 Boorowa Street	(02) 6382 7772

Queensland

Ayr	Delta Electrix, East End Centre, Parker Street	(07) 4783 1566
Bundaberg	Bob Elkin Electronics, 65 Bourbong Street	(07) 4152 1785
Boonah	Boonah Electronics, 2/16 Yeates Avenue	(07) 5463 2606
Caloundra	Electro-Mart, Cnr Bowman Rd & Bulcock St	(07) 5491 8533
Gympie	Cooloola Electronics, Shop 4, Sovereign Cinema Complex, 82-84 Monkland Street	(07) 5483 6677
Gladstone	Gladstone Hi-Fi, 38 Tank Street	(07) 4972 6660
Hervey Bay	Keller Electronics, Shop 20, Bay Central Shopping Centre, Boat Harbour Dr, Pialba	(07) 4128 3749
Innisfail	Innisfail Hi-Fi Centre, 25A Owen Street	(07) 4061 2014
Kingaroy	South Burnett Computer Services, 30 Alford Street	(07) 4162 5777
Maryborough	Keller Electronics, 229 Adelaide Street	(07) 4121 4559
Mossman	Mossman Electronics, Shop 2, 1-3 Front Street	(07) 4098 2200
Mt Isa	Outback Electronics, 71 Barkly Highway	(07) 4743 3475
Mackay	Stevens Electronics, 17a Evans Avenue	(07) 4951 1723

South Australia

Mount Gambier	Anvil Electronics, Shop 1/ 33 James Street	(08) 8725 3366

Tasmania

Burnie	Electronic City, Cnr Wilson & Cattley Streets	(03) 6431 9222
Devonport	A.I. Electronics, 165 William Street, Fourways	(03) 6424 8322

Victoria

Ararat	Jerram Auto Parts & Electronic Centre, 216-218 Barkly Street	(03) 5352 2345
Bairnsdale	Green Gage Services P/L, 87B Main Street	(03) 5152 5677
Benalla	North East Electronics, 19 Bridge St East	(03) 5762 2710
Colac	Colac Electronics, 247 Murray Street	(03) 5232 1799
Horsham	Burgess Camera House, 32-34 Pynsent Street	(03) 5382 4680
Hamilton	Hamilton Camera House, 161 Gray Street	(03) 5572 2865
Moe	Roylaine, 40 Moore Street	(03) 5127 4255
Morwell	Roylaine, Cnr Tarwin & George Streets	(03) 5134 3212
Warragul	Roylaine, 16 Smith Street	(03) 5623 4255
Wangaratta	Wangaratta North East Electronics, 5-7 Murphy St.	(03) 5722 2848
Warrnambool	Koroit St Electronic Services, 160a Koroit Street	(03) 5561 5111

Western Australia

Albany	Stirling Electronics, 69 Lockyer Avenue	(08) 9842 3404
Busselton	Busselton Electronics, 63 Queen Street (Cnr Kent St)	(08) 9754 2991
Geraldton	Angora Pty Ltd, 61 Marine Terrace	(08) 9921 1278

International

Suva Fiji	Universal Electronics 31 Knollys Street	0011 (679) 300 620
Vanuatu	TRM Ltd, Kumu Highway Port Vila	0011 (678) 26 415

Repairs & Spares

NSW	Repairs	Ph: (02) 9937 3377	Fax: (02) 9887 2972
	Spares	Ph: (02) 9937 3311	Fax: (02) 9937 3327
VIC/TAS	Repairs	Ph: (03) 9429 5817	Fax: (03) 9428 9056
QLD/NT	Repairs	Ph: (07) 3391 8096	Fax: (07) 3891 6370
WA	Repairs	Ph: (08) 9375 8550	Fax: (08) 9375 8551
SA	Repairs	Ph: (08) 8349 4762	Fax: (08) 8262 7642

Head Office – Sydney

Cnr Lane Cove & Waterloo Roads, North Ryde NSW 2113 Australia
Ph: (02) 9937 3200
Fax: (02) 9888 3631

State Offices

NSW	Ph: (02) 9642 8784	Fax: (02) 9642 3939
VIC/TAS	Ph: (03) 9428 0141	Fax: (03) 9427 9358
QLD/NT	Ph: (07) 3391 6490	Fax: (07) 3391 5717
WA	Ph: (08) 9375 8440	Fax: (08) 9375 8441
SA	Ph: (08) 8359 4094	Fax: (08) 8359 4095

New Zealand Office

31-35 Rawene Road, Birkenhead, AUCKLAND
Ph: 0011 (64 9) 488 2198
Fax: 0011 (64 9) 488 2101

* Authorised Stockists are privately owned businesses in regional areas which are authorised to sell the Dick Smith Electronics range of products under the Dick Smith Electronics banner. If our Authorised Stockists do not have the product you wish to purchase, they can order it for you subject to availability. Prices may vary in some areas due to additional costs incurred e.g. freight.

DICK SMITH ELECTRONICS

That's where you go!

Shimasu 2 Piece

Enjoy the slimline, contemporary design of these stylish, wall-mountable phones. Features include tone-pulse switching, call waiting compatibility, pause and redial functions.

Beige F 4330

$24.50

SHIMASU

12 MONTH REPLACEMENT WARRANTY

Easy Phone

This wall-mountable easy-to-use phone, features large buttons, an 'in use' indicator, slim design, redial function, tone pulse switchable, and ringer volume control.

F 4513

SHIMASU

12 MONTH REPLACEMENT WARRANTY

$29.95

Décor phone

Lift your décor with these stylish slim-line phones. Great price, metallic finish in silver or charcoal. Wall-mountable with back-lit keys and LCD display.

Silver F 4334
Charcoal F 4335

NEW FOR '99

SHIMASU

12 MONTH REPLACEMENT WARRANTY

$39.85

DSE 13-memory Deskphone

This phone has a 13-number memory, mute and redial functions, an adjustable ringer and a visual ringer.

F 4515

DSE

12 MONTH REPLACEMENT WARRANTY

$49.90

Slim-Line Phone

This low-cost phone provides a backlit keypad that makes it easy to see at night or in poor light, so it's perfect for the bedroom. With 10 one-touch memories, redial and mute.

Ivory F 4321

Telstra

$55

Bedside Buddy

More than just a phone, this slim stylish design features AM/FM radio or buzzer alarm, including a snooze function! This multi-function piece includes a green digital clock, sleep countdown timer, big button keypad, reset button & adjustable volume. The radio automatically mutes when handset is lifted. Optional backup battery (not supplied).

F 3252

AUDIOLINE™

$69.90

DSE Speakerphone

Visual ringer and adjustable volume, call-waiting compatible, mute function, redial, speakerphone, LCD display, timer and 13-number memory.

F 4516

DSE

12 MONTH REPLACEMENT WARRANTY

$79.95

Touchfone 400

With 10 one-touch memory buttons, soft touch dialling and last number redial. Also features simple-to-use Easycall buttons and is hearing aid compatible.

F 4580

Telstra

$99

DSE Speakerphone with Caller ID

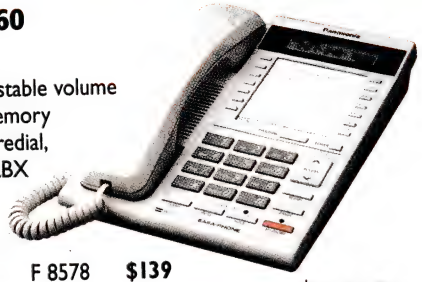
Caller ID – displays caller's name* & number, is call waiting compatible, features call message counter and new call indicator and adjustable ringer tone & volume control.
Can be wall mounted.
F 4518
* Network dependent

DSE 12 MONTH REPLACEMENT WARRANTY NEW FOR '99

$98

PANASONIC KXT-2260 Speakerphone

This speaker-phone with adjustable volume & LCD display features 28 memory stations, 1 touch dialling and redial, electronic volume control, PABX and easycall compatibility.
F 8579



Speakerphone without LCD F 8578 $139

Panasonic

$197

DSE Remote Telephone Answering Machine

With call screening, voice activation and easy remote, on-touch operation.
Ivory F 7013
Metallic grey F 7017

DSE 12 MONTH REPLACEMENT WARRANTY NEW FOR '99

$49.85

Telstra TAM

Telephone Answering Machine
Shuttle operation, full remote function and call screening.
Beige F 8240

Telstra

$69

DSE Remote Telephone Answering Machine with Time & Day Stamp

Features time & day stamp, voice-activation, call screening, and an easy one-touch remote operation.
F 7016

DSE 12 MONTH REPLACEMENT WARRANTY NEW FOR '99

$69.95

DSE Digital TAM

Telephone Answering Machine
A fully digital answering machine that has a 12 minute record time, time/date stamp, call screening and LED call counter.
Ivory F 8011
Metallic grey F 8012

DSE 12 MONTH REPLACEMENT WARRANTY

$89.90

Digital TAM with Caller ID

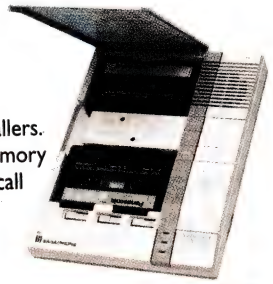
This TAM stores 72 names and numbers, and features Caller ID, time and day stamp, 3 line backlit display, 14 minutes of recording time and upright design for easy viewing.
F 7704

VOXSON

$139

Dual Tape TAM

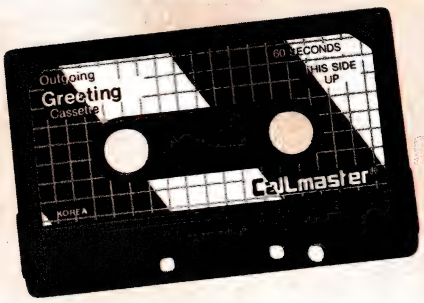
Telephone Answering Machine
Allows you to record extended greeting messages & ensures there are no delays for callers. With an LED call counter, remote control, memory playback, security code, memo recording and call screening. Takes standard cassettes.
F 8336



Panasonic

$179

Telephone Answering Machine Tapes



Outgoing Message Tape 15 sec
C 3310 **$12.95**
Outgoing Message Tape 30 sec
C 3311 **$12.95**
Outgoing Message Tape 60 sec
C 3312 **$12.95**

Leaderless Message Tape 60 sec
C 3313 **$10.95**
Outgoing Message Tape 60 sec
C 3312 **$12.95**

DSE Cordless

With 10 channels and advanced super CCT Circuitry you'll have fantastic clarity and reduced interference. The DSE offers 10 memories, paging facilities and it has a seven-day battery life. The DSE comes with a 12 mth replacement warranty.
F 7020

DSE 12 MONTH REPLACEMENT WARRANTY **$69**

Uniden Single Channel Cordless

An attractive and modern design, this cordless single-channel phone has redial and is call-waiting compatible. It's also wall mountable with a flexible antenna.
F 7235

Uniden **$89**

Uniden Cordless

Stylishly designed, this superb cordless phone from Uniden features 10 channels, 14-day battery life, 10 number memory and a 1-way paging facility. It is wall or desk mountable, and includes a state-of-the-art compander circuit as well as auto-talk and EasyCall compatibility.
F 7244

Uniden **$129**

Sanyo Cordless Phone

NEW FOR '99

This Sanyo cordless phone has Super Compander Noise Reduction that guarantees the very best reception. It has an extended range, paging capabilities, 10 memories, 10 channels, and three-week stand-by battery life.
F 7283

SANYO **$138**

Panasonic Cordless Phone

This cordless phone has 10 channels and 10 memories, paging, 20-day battery life, dynamic sound focus technology, backlit keypad, rubber antenna, call-waiting compatibility and handset locater.

White	F 7417
Black	F 7418

Panasonic **$149**

Sanyo Base Dial Cordless Phone

NEW FOR '99

With Super Compander IV Noise Reduction, extended range, 10 key speakerphone base, EasyCall compatibility, 21 day standby and 10 channel scan.
F 7284

SANYO **$186**

Panasonic Cordless Phone

NEW FOR '99

This on-base dial cordless features speakerphone, 2 way page with intercom, 3 hour ultra charge, 20 day standby battery and an additional handset option (up to 4 in total).
F 7419

Extra Handset F 7421 **$119**

Panasonic **$199**

Panasonic Flip with Base

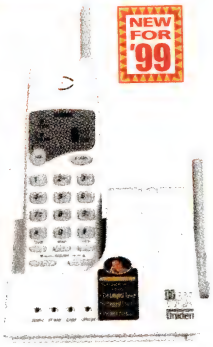
This pocket-sized portable handset with dual dialling pads is a handsfree speakerphone with 10 channels. Features mute button for privacy, automatic dialler and auto security system.
F 7409

Panasonic **$299**

900 MHz Cordless Range

Uniden Digi Max 910 Cordless

900MHz long range digital cordless phone with 5 hours talk time and Spread Spectrum Technology. Features 10 channels and 20 number memory dialling and is call waiting compatible.
F 7265



Uniden $329

Panasonic KXTG-200AL Cordless

This phone features the latest 2.4GHz Spread Spectrum Technology, extra long range and an ultra clear signal. Also comes with a dual antenna system and back-lit keypad so you can see what you are dialling at night.
F 7423

Panasonic $349

Panasonic KXTG-210AL Cordless

This cordless unit has 2.4GHz Spread Speakerphone Spectrum Technology which means you can talk further from the base. Also features on base dail, ultra clear signal, dual antenna system, hands free speakerphone for ease-of-use and headset jack & belt clip.
F 7424

Panasonic $399

Cordless

Uniden Dual Line Cordless Phone

This dual line phone is perfect for small office, home office applications. Other features include on base dialling for maximum use with or without the handset.
F 7261

Uniden $199

Panasonic Caller ID Cordless

Talk while you walk with this cordless phone featuring 2 line LCD display, dual dial pads and a handsfree speakerphone. This phone also features caller ID so you will always know who is calling you before you answer the phone.
F 7422

Panasonic $249

Uniden Multi Handset Cordless Phone

With multi handset operation, this amazing phone comes complete with 2 handsets & chargers – colour coded for easy distinction between handsets. Transfer calls between units on this phone featuring 10 channel auto scan, 10 speed dial memory and backlit keypad. Also comes with page/find feature and is call waiting compatible. Expandable up to 4 handsets. F 7262

Uniden $328

900MHz Cordless Phones

Come visit our store and choose from our range of 900MHz cordless phones. 900MHz phones utilise the latest technology in spread spectrum. Spread Spectrum Technology provides users with benefits such as superior range, (up to 1km in ideal conditions) minimal static noise, enhanced voice clarity, crystal clear reception and better security from eaves droppers. These phones are perfect for properties, high rise buildings and boats.

DSE Big Button Phone with Answering Machine

This integrated phone and answering machine features digital OGM, microcassette incoming, loud ringer, visual ringer, one-touch answering machine, 13 number memories and large buttons.

F 4514

12 MONTH REPLACEMENT WARRANTY

$99.60

DSE

Shimasu Integrated Answer Machine

This fantastic system has all the convenience you'll ever need. Time/day stamp, numeric call counter display, memo facility, remote message retrieval, two-way recording, call screening and 10 number memory.

F 7501

12 MONTH REPLACEMENT WARRANTY

SHIMASU $79.80

Sanyo Cordless with Answering Machine

With 10 channels, 10 memories and super compander noise reduction, this white cordless features a shuttle answering machine and 21 day standby battery life.

F 7282

SANYO $229

Panasonic Cordless Answering Machine

Features 10 channels and 10 memories, an intercom with two-way paging, a battery with 30-day standby life, 16-second digital outgoing message, memo recording, pager call, new message playback, auto-logic operation, dynamic sound focus plus technology, backlit keypad.

F 7415

$229

Panasonic

Uniden Cordless Phone, Answering Machine and Speakerphone

This phone has it all; digital answering machine with 20 minutes recording time, time/day stamp and message counter, 10 channels, 10 memories and 14 day battery life. With speakerphone on the base, it provides for total handsfree performance.

F 7242

Uniden $259

Panasonic Cordless Telephone with Answering Machine

Full digital answering machine with voice time & day stamp, 16 second outgoing message & 16 mins total recording time and 2 way recording and message memo. Other features include a 5% increase in range, 10 channels and 10 memories and duplex handsfree speakerphone.

F 7416

NEW FOR '99

$299

Panasonic

Uniden Cordless Speakerphone with Answering Machine and Caller ID

Caller ID display on the handset with 10 channels, 30 caller display dial back memories and 14 day battery life plus digital answering machine with 25 minutes recording time, time/day stamp and message counter. It also features a speakerphone for handsfree operation.

F 7251

Uniden $329

Caller ID

Never be bothered by those nuisance callers again! With caller ID you can tell who is calling you before you pick up the phone. Dick Smith Electronics has a large range of caller ID units and phones with caller ID to choose from. Find out who's calling you today!

Shimasu Caller ID With one touch call-back

Displays caller's name*, number, date and time of call with a 'New Call' symbol for calls which have not been reviewed before. It features one-touch call-back. Includes an LED indicator for new calls and message waiting, 12-character name and date/time. Stores up to 99 numbers, shows how many times a certain number has called and the latest time of call.

F 5223

$49.95

12 MONTH REPLACEMENT WARRANTY SHIMASU

* Network Dependent

Shimasu VIP Caller ID

This unique unit features caller ID with VIP caller alert – 3 caller alert tones to choose from for grouping & distinguishing between caller groups – (eg family, friends and work). Also features name edit (name tagging) – preset names & numbers into memory and the name will appear next time that person calls One touch call-back feature for redialling desired numbers and more.

F 5225

$59.80

SHIMASU 12 MONTH REPLACEMENT WARRANTY NEW FOR '99

DSE Caller ID & Alarm clock

This handy unit shows caller's name*, number, time & date of call with a 64 caller ID memory, call counter and alarm clock with snooze function. Features a large, backlit LCD display and AC adaptor. Requires 4 x 'AAA' battery (not included).

F 5226

$79.75

12 MONTH REPLACEMENT WARRANTY NEW FOR '99 DSE

* Network Dependent

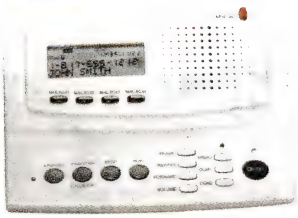
DSE Talking Caller ID

Now your Caller ID unit literally announces who is phoning! No need to interrupt your activities, because this unit's "voice" will tell you callers' names* and numbers. Features automatic text to voice announcement, 99 number memories, name search feature, new message icon and auto dial back.

F 5233

12 MONTH REPLACEMENT WARRANTY NEW FOR '99 DSE **$119**

Available August **Network Dependent*



DSE Digital Answering Machine with Caller ID

This digital answering machine comes complete with Caller ID function. Messages are time and date stamped and easily accessed. Features include LCD display, 64 name* & number caller ID memory, call screening and four personal mail boxes.

F 5232

12 MONTH REPLACEMENT WARRANTY NEW FOR '99 DSE **$129**

Available August **Network Dependent*

DSE TV Caller ID

No more need to get up from the TV to find out who's on the phone. Connect this unit to your TV & phone line and the caller's details will flash up on the screen!* Store up to 160 numbers, remote control, message waiting and more. What a great idea!

F 5234

12 MONTH REPLACEMENT WARRANTY NEW FOR '99 DSE **$159**

Available August **Network Dependent*

Voxson Caller ID Digital Answering Machine

Shows the phone number of who's ringing. Stores 72 names and numbers of callers and has day/time stamp plus a three-line backlit display. Full digital answering machine gives 14 minutes of digital recording time.

F 7704

VOXSON **$139**

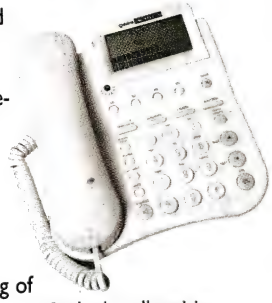
Cordless Caller ID

This cordless Uniden has a display on the back of the handset that allows for the identification of the person ringing. It has 10 channels, 20 memories, 30 caller display dial-back memories, 2-line alpha numeric display, 7 hours of talk time, call timer, auto and manual channel change, compander circuitry, time/date stamp, tone dialling, last number redial and a backlit LCD display. F7247

Uniden **$199**

Telstra Caller ID Desk Phone

Displays the name* and number of the caller before the receiver is picked up. Includes pre-dial facility, handsfree operation, on-hook dialling, 4 one-touch dial memories, 50 number call log, 50 name and number directory, call screening of 5 unwanted calls, call timer & clock, call waiting facility, recall facility, last number redial and menu driven network facilities.



F 5276

Telstra **$199**

**Network Dependent*

Quick Connect Terminals
Quick internal connection of cable to telephone plugs and sockets.
F 2580
$3.95

Standard Telephone Plug
Six-connector Line Plug to fit standard telephone cable.
F 5117
$6.95

Standard Telephone Socket
Accepts any standard line plugs. Ideal for extensions or as replacement.
F 5118
$6.95

Telephone Wall Mount Socket
Accepts any standard telephone plug.
F 2012
$7.95

Phone Socket/ Adaptor
Standard telephone plug at one end and modular adaptor at the other.
F 5095
$8.95

Standard Plug/ 2 Modular Adaptor
605 plug at one end and 2 modular adaptors at the other.
F 5107
$8.95

Standard Plug/Standard Socket and Modular Adaptor
605 plug to 610 socket and modular adaptor.
F 5110
$8.95

Standard Telephone Adaptor
Standard plug to 2 x standard sockets. Allows the connection of 2 devices to 1 socket.
F 5112
$8.95

Telephone Plug/Adaptor
Plugs into standard telephone socket at one end and accepts modular plug at the other end.
F 5094
$8.95

Mode 3 Double Adaptor
Double adaptor for connecting modems or fax machines to your telephone line.
F 5114
$22.95

Modular Plug Packs of 5
8p8c F 2573
6p6c F 2574
4p4c F 2575
6p4c F 2576
$5.95 pk

Extension Coupler
Double-line socket for joining two modular plugs.
F 2577
$6.20

Modular Wall Socket
Wall mount socket which accepts modular plugs.
F 2570
$7.95

Modular Double Adaptor
Allows the connection of two devices using one modular socket.
F 2578
$7.95

3-way Modular Coupler
Ideal for answering machine, phone and fax modem.
F 2579
$8.95

3-way Modular Adaptor
Allows the connection of three devices to one modular socket.
F 2581
$8.95

Privacy Switch
Ensures no one can cut into your line.
F 2804
$9.90

Message Stopper
Automatically switches off the answering machine when you pick up the phone.
F 2807
$9.90

Modular Wallplate Bracket
For wall mounting your phone.
F 2450
$12.95

Modular Wallplate with extensions.
F2451
$14.75

Modular Wallplate
Modular insertion, displacement connection.
F 2642
$12.95

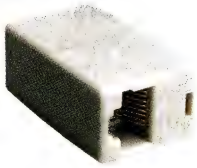
Why do I have a bigger phone socket?

A new standard in telephone plugs and sockets is being rolled out in Australia. Many new homes now have larger modular sockets installed. These bigger sockets are called RJ45 sockets and are 8p8c. At Dick Smith Electronics, Australia's own Phone Shop, we have the adaptors and leads required to ensure your current equipment works with the new standard.

Double Adaptor
8p8c RJ45.
F 2640

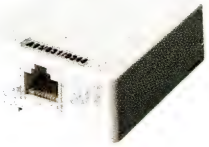
$9.95

Modular Inline Coupler
8p8c RJ45, for telephone use only.
F 2641



$9.95

Modular Surface Socket
8p8c RJ45.
F 2645



$9.95

Modular RJ31 Surface Jack
8p8c RJ45.
F 2646

$9.95

Modular 3 Way Coupler
8p8c RJ45.
F 2644

$10.95

Wallplate IDC
8p8c RJ45.
Modular insertion displacement Connection.
F 2643

$14.85

Linecord
RJ45-RJ45.

1m	F 5240	$12.95
3m	F 5241	$15.95
5m	F 5242	$18.95

Linecord
RJ45-RJ12.

1m	F 5243	$12.95
3m	F 5244	$15.95
5m	F 5245	$18.95

FM Line Filter
Rid your phone or fax of annoying FM interference.
F 2421

$9.95

3-Metre Line Cord
Original 3-metre Telecom line cord.
F 2805

$9.95

Standard Extension Cords

1m	F 2409	$9.95
3m	F 2400	$12.95
5m	F 2402	$14.95
10m	F 2405	$18.95
15m	F 2408	$24.95

Piggy Back Cable
Great for wall mounting. 170mm.
F 2510

$5.95

Modular Line Cords

1m	F 5093	$8.95
3m	F 5092	$12.95
5m	F 5096	$14.95
10m	F 5097	$17.95
15m	F 5098	$22.95

Modular Extension
5-metre male modular to female modular cord.
F 2809

$14.95

Standard 610 Socket to Modular
5m.
F 2808

$14.95

Standard 605 Male to Modular

2m	F 2501	$9.95
10m	F 2422	$18.95
15m	F 2423	$24.95

Extension Lead Double Adaptor to 610 socket

5m	F 2420	$19.95
15m	F 5103	$29.95

Double Adaptor To Modular Plug

5m	F 2424	$19.95
10m	F 2210	$25.95
15m	F 2425	$29.95

30m Cord 4 Conductor
For the lengthy jobs.
F 2410

$29.95

3m Coiled Handset Cables

White	F 2455
Ivory	F 2457
Black	F 2458
Beige	F 2461 (DSE colour)

$9.95

8m Coiled Handset Cables

Ivory	F 4980
Black	F 4981
Beige	F 2462

(DSE colour)

$14.95

Voice Data Leads – Cat 5

Cat 5 voice and data leads in a range of lengths to suit you.

Length	Cat No.	Price
1m	F 2844	$9.90
3m	F 2845	$17.90
10m	F 2846	$28.90
15m	F 2847	$34.90

Extension Reels

A tidy and convenient way to hide your extension cord when not in use.
4.5m Modular F 2308

$14.80

Length	Cat No.	Price
10m Standard	F 2305	$14.50
15m Standard	F 2307	$22.50

Telephone Pick-Up

Simple-to-use, just plug it into your telephone and you have an audio output plug.
F 2705

$7.95

Phone Shoulder Rest

F 2830

$9.90

Touchfone Mount Kit

Wall mount your Telstra touchfone.
F 4571

$14.95

Telephone Extension Bell – 10 Metres

This telephone extension bell allows you to 'bring the ring' closer to where you are. Ideal for phones with a soft ring or for phones located at the other end of the house.
F 5119

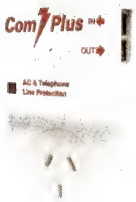
$22.95

Ringer/Amplifier

With Flashing Light
Flashing light indicates an incoming call.
With selectable tone and adjustable volume.
F 5125

$34.95

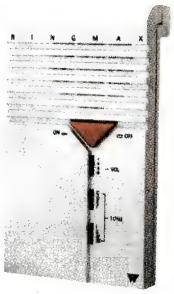
Surge Protector



Protects mains power and telephone line from spikes and surges. Prevents power surges destroying units.
F 2852

$47.95

Ringmax Amplifier



Ringmax lets you select your own individual ring – no more ring confusion! Ideal for home or office, it's quick and simple to install. With adjustable volume and ring tone. Supplied with linecord, adaptor, wall mount and instructions.
F 5400

$54.80

Antennas

Cordless Phone Handset Antenna

Suits F 7002, F 7102 and F 7220 models.

Rubber	F 7920	$29.95
Metal	F 7902	$19.50

Cordless Phone Antenna

Suits Panasonic KXT3000.

Rubber	F 7922	$29.95
Metal	F 7932	$29.95

Replacement Rubber Antenna

Suits Panasonic models KX-T3806, KX-T3826 and KX-T3836.

Rubber	F 7924	$29.95
Metal	F 7934	$29.95

Metal Antenna for Sanyo CLT 5280/5880 Cordless Phone

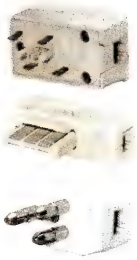
Rubber	F 7926	$29.95
Metal	F 7936	$29.95

DSE Universal Headset

Comfortable headset with amplifier designed to suit 99% of phones including PABX. Change between the headset and handset at the touch of a button. With its own amplifier you control the volume of the caller's voice – ideal for noisy environments.
F 5228

$148

Travel Adaptors



Perfect travel companions for adapting your Australian telephone equipment to a foreign country. Great for PC modems etc. For modem portability in foreign countries includes pouch.

European pack	F 5351
Asian pack	F 5352
South Africa & NZ pack	F 5353

$49.95 ea

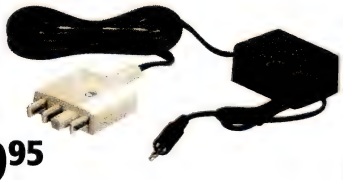
Handset Cord Twist Stopper

Stops your phone and electrical cords from twisting.
F 2465

$14.95

Music On-Hold Adaptor

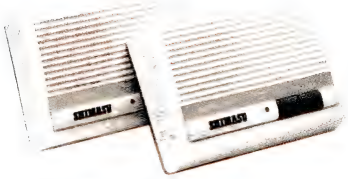
Plug into a commander and then a radio for simple music on-hold.
F 2825



$29.95

5m Commander Extension Lead

F 5105 $24.95



Low-Cost Intercom

Great around the home or office, this bargain priced intercom has adjustable volume control, push-to-talk button and a monitoring indicator. Includes master and sub-station plus cable.

F 1034 **$19.50**

SHIMASU

Wireless Intercom

Becomes a room monitor at the touch of a button! Also, when it's in use as a monitor, you get the convenience of voice activation. It's mains powered and expandable.

F 1240 **$79.95**

SHIMASU

Baby Monitor

For Peace of Mind

Clip the receiver to your belt or mount it on your desk/wall and you'll always know what your baby's up to! It can run on either batteries or mains power and has a power-on indicator, voice-activation and volume control.

F 1270 **$69.95**

Kiddicall

Voice-Activated Wireless Intercom

The ultimate in home communication! It's expandable up to three stations and doubles as a room monitor. Simply plugs into mains and has talk-lock key, voice activation plus volume control. Includes 2 units.

F 1255 **$99.95**

Optional extra substation F 1256 **$49.70**

SHIMASU

Stealth Decoder

Decoder for use with Telstra distinctive ring services, Duet and Multiple number.

The 'stealth' silently determines which phone number is being called and sends the call to the appropriate device eg.phone, fax, modem etc. Line powered and easy to install.

F 0703 **$119**

Brother P-Touch 85

9 type styles and 5 type sizes to choose from to create labels on this hand held machine with LCD display.

F 1613

brother

$99

Ibico ID Laminator

A fantastic idea to keep those IDs, luggage tags and wallet pictures, clean and protected.

F 1340 **$129**

Laminator pouches F1343 **$6.95**

Ibico A4-A3 Laminator

Make professional-looking documents in A4 and A3 sizes with this handy laminator. Keep documents protected at all times.

F 1342 **$399**

A4 pouches	F 1344	**$24.95**
A3 pouches	F 1345	**$44.95**

Personal Cross Cut Shredder

For small or home office, this shredder is ideal for confidential documents.

F 1334

NEW FOR '99

5 YEAR WARRANTY ON CUTTERS

DAHLE **$199**

Compact Paper Shredder

Shreds up to 9 x A4 70gsm sheets down to 3.9mm strips. Shredding speed is 5m per minute. With 240mm feed width, 130 watt motor and automatic shredding through 'trip' switch. Has a large 25 litre shred bin. Made in Germany.

*Not on show in all stores.

F 1331 **5 YEAR WARRANTY ON CUTTERS**

DAHLE **$399**

Deskside Paper Shredder

Shreds 9 x A4 70gsm sheets down to 3.9mm strips at 5m per minute. Maximum feed width is 240mm, allowing computer-sprocketed paper to be shred. With automatic operation through trip switch and 130 watt motor. 25 litre bin has a front opening to allow other waste disposal. Made in Germany.

*Not on show in all stores.

F 1332 **5 YEAR WARRANTY ON CUTTERS**

DAHLE **$499**

SHARP FO 175 Thermal Fax

With caller ID – shows callers name* and number. Features 10 one-touch & 20 speed dial settings 15 sec transmission speed, superfine resolution and time & paper-saving functions. This compact design is also FaxStream Duet compatible.

F 0873 **Network dependent*

SHARP **$299**

SHARP FO 375 Thermal Fax

This fax with caller ID and cutter is perfect for the home or office. It has a fast 15 second transmission speed and superfine resolution. This fax also has a 10 sheet document feeder, time & paper saving functions, an anti-curl mechanism and is FaxStream Duet compatible.

F 0874

SHARP **$349**

PANASONIC KX-FT33 Thermal Fax

This fax has a caller ID display, cutter, a unique easy dial function, 100 name memory and a delayed transmission feature. Make this fax machine a part of your home or office.

F 0847

Panasonic **$369**

SHARP FO 455 Thermal Fax with Answering Machine

This fax features a built-in telephone answering machine facility, 20 page memory, 3 personal mail boxes and a 20 document sheet feeder for large documents. Fax your friends, family or colleagues with this fantastic machine.

F 0855

SHARP **$427**

PANASONIC KX-FT37 Thermal Fax with Answering Machine

This thermal fax machine with cutter features caller ID, a digital answering machine, digital handsfree speakerphone, unique easy dial function and a 100 name directory. This fax machine offers a complete solution to all your business needs.

F 0848

Panasonic **$469**

SHARP FO 1460 Plain Paper Fax

This super fast plain paper fax has a 9 second transmission speed, superfine resolution, silent fax reception and is FaxStream Duet compatible. It also features a 200 sheet paper tray, 30 page memory, 99 number memories and broadcasting capabilities.

F 0871

SHARP **$499**

Panasonic KXF-1010 Fax

This plain paper fax features a handsfree speakerphone and answering machine interface and a telephone directory with name search.

F 0844

Panasonic

$552*

Sharp FO1660 Multi Function Fax

This plain paper thermal transfer fax machine prints at 200 x 400dpi, has a TWAIN compatible scanner option, copier facility for enlarging and reducing and has a 6 second transmission speed. Fast fax for fast business.

F 0875

SHARP

$699*

Sharp FO2150 Colour Inkjet Fax

With a 6 second transmission speed and 14.4 bps modem, this multi function fax features a multi copy reduction/enlarge feature, telephone and answering machine interface, TWAIN compatible scanner and full colour 600 x 600dpi printing. Ideal for office use.

F 0877

$749*

SHARP

Brother Laser Fax Machine

With 14.4Kbps high speed modem and 6 second transmission speed, this has a 20 page auto document feeder, 200 sheet plain paper tray, multi copying function for up to 99 sorted copies with reduction and enlargement, 100 speed dials and is FaxStream Duet compatible.

F 0827

brother.

$1296*

DSE 30m Fax Roll

Suits most Thermal Fax machines. Spacer is included for machines that accept 216mm rolls only.

F 0837

$5.90 2/pk

15 metre 3 pk	F 0939	$11.95
50 metre	F 0942	$5.95
100 metre	F 0934	$8.95

Brother 30m Thermaplus Roll

2 pack.

F 0937

brother.

$24.95

Sharp Thermal Ribbon FO15CR

Suits FO1460, 1450, 1650, 1660 & 1850 models.

F 0872

SHARP

$48

Panasonic KXF-1010/1110 Ribbon

F 0845

Panasonic

$56

Fax Cleaning Kit

Keep your fax machine in top condition by regularly cleaning it. Kit includes cleaning solution, buds, brushes, air brush and cleaning tissue.

F 0888

$32.95

Stealth Decoder

Decoder for use with Telstra distinctive ring services, Duet and Multiple number. The 'stealth' silently determines which phone number is being called and sends the call to the appropriate device eg. phone, fax, modem etc. Line powered and easy to install.

F 0703

$119

Telstra FaxStream Duet

You can now have two numbers on the same phone line with the FaxStream Duet service. As well as being cheaper than having a dedicated fax line, duets special distinctive ring allows duet-compatible fax machines to automatically recognise and answer incoming fax calls. Ideal for small or home office users, it also allows for phone calls to be diverted while still receiving faxes when out of the office. Come into our store and our expert staff will sign you up to this great service for just $4 per month.

Telstra

*Not available in all stores

SAMSUNG ERICSSON MOTOROLA Authorised Cellular Outlet NOKIA CONNECTING PEOPLE

A Mobile Solution for all Walks of Life!

This year is one of the most important years in mobile phone technology, with the closing of the analogue network in large, populated areas of Australia. New special arrangements are being made to service customers in rural areas. With the close down of the analogue network, the opening of new CDMA networks and great new features on GSM handsets, more people than ever will be considering buying a mobile phone.

These days a mobile phone can be much more than just a phone. It can be your lifeline to your lifestyle. Stay in touch with friends and family so you never miss out on what is going on. It also is a versatile communications assistant for the business person on the go.

Dick Smith Electronics has been in the mobile phone business for many years and has developed an excellent reputation, offering an extensive range in mobile phone technology to suit any customer that needs the right cellular answer!

We have one of the biggest ranges of phones & accessories offering the best in quality and value. Our cellular phones are selected from the leading manufacturers of mobile communication technology.

Whether you want a mobile phone to complement your active lifestyle, to be more effective in business, or in case of an emergency, our superb and affordable range includes phones that offer everything you need. We have phones that are data compatible, allowing you to surf the Internet, utilise email and send faxes from almost anywhere at anytime.

If size is important to you, we have phones to fit your needs; anywhere from a pocket, handbag, glove box or toolbox. Our experienced salespeople can also determine which one of Telstra's MobileNet plans is right for you.

Complement your mobile phone with a wide range of phone accessories & experience the power of mobile phone communication in your hands.

MobileNet Premium Dealer

PHILIPS NEC Panasonic

Leather Carry Cases

Protect your investment with a handsome, custom-made genuine leather carry case.

Description	Cat No.	Price
Leather Case Samsung SGH250	E 1570	$28.00
Leather Case Sagem RD750T	E 2070	$28.00
Leather Case Nokia 5110	E 2156	$28.00
Leather Case Nokia 6110	E 2180	$28.00
Leather Case Alcatel OT View	E 2233	$25.00
Leather Case Ericsson 788 768	E 2270	$28.00
Leather Case Panasonic G500 G450	E 2370	$25.00
Leather Case Panasonic 520	E 2323	$28.00
Leather Case Motorola Jazz	E 2415	$28.00
Leather Case NEC Fido	E 2570	$28.00
Leather Case Philips Genie	E 3370	$28.00
Leather Case Ericsson 318/337	E 3520	$28.00
Leather Case Ericsson 398 688 628	E 3538	$28.00
Leather Case Nokia 2110/e	E 3620	$28.00
Leather Case Nokia 8110	E 3770	$28.00
Leather Case Nokia 3810	E 3777	$28.00
Leather Case Nokia 1600/10/30	E 3820	$28.00
Leather Case Philips Twist	E 3871	$28.00
Leather Case Motorola D160	E 2420	$25.00
Leather Case Motorola Startac	E 2620	$25.00
Leather Case Replacement Clips	E 3872	$2.00

Coloured Front Panels

	Cat No.	Price
5110 Antique Red Xpress Cover	E 2140	$29.95
5110 Bermuda Blue Xpress Cover	E 2141	$29.95
5110 Marlin Blue Xpress Cover	E 2142	$29.95
5110 Shark Silver Xpress Cover	E 2143	$29.95
5110 Tango Orange Xpress Cover	E 2144	$29.95
5110 Island Yellow Xpress Cover	E 2145	$29.95
5110 Gecko Green Xpress Cover	E 2146	$29.95
5110 Techno Green Xpress Cover	E 2151	$29.95
Ericsson 628 Fr Panel Blue 3pk	E 3165	$19.00
Ericsson 628 Fr Panel Ylw 3 pk	E 3167	$19.00
Ericsson 628 Fr Panel Red 3pk	E 3168	$19.00
Ericsson 628 Fr Panel Grey 3pk	E 3169	$19.00

Miscellaneous Items

	Cat No.	Price
Vibe-Alert – Digital Vibrator	E 3119	$49.95
SIM Card Converter	E 3141	$4.95
Nokia 6110/5110 External Ant Adaptor	E 2163	$39.95
Ericsson 788/768 External Ant Connector	E 2291	$69.00
FME Connector	E 3115	$4.95
TNC Crimp Connector	E 3140	$4.95
Mini UHF Crimp Connector	E 3142	$4.95
Nokia 1610 1600 Antenna Adaptor	E 3818	$14.50
Universal Air-Con. Vent Mount	E 3090	$8.50
Panasonic G600 Car Holder	E 2399	$35.00
Universal Motorola Tax Holder	E 3091	$12.40
Universal Ericsson Holder	E 3092	$12.40
Universal Nokia Holder	E 3093	$12.40
Nokia 3810 Holder	E 3094	$12.40
3097 Nokia 6110 5110 Holder	E 3097	$12.40
Clam Shell V Mount Bracket	E 3143	$8.95
Universal H/free Microphone 2.5mm	E 3148	$23.50
Cig. Socket Extension and Holder	E 3113	$23.00
Suction Window Mount and Holder	E 3105	$24.95
Universal H/free Microphone 3.5mm	E 3147	$19.95

Waterproof Mobile Phone Pouch

Always use protection, especially for your mobile phone. Save your mobile phone from splashes with this see-through plastic case – perfect for the beach or near the pool.

E 3114 **$19.95**

Dual Car Cigarette Lighter Socket

A double adaptor for your lighter socket. Allows you to use your lighter while charging the battery on your mobile phone.

E 3102 **$18.50**

Cigarette Socket Converter 24V to 12V

E 3112

$36.50

Batteries

Description	Cat No.	Price
Samsung SGH250 Ext NiMH	E 1563	$89.95
Samsung SGH250 Slim NiMH	E 1564	$89.95
Sagem RD750T Original Std	E 2058	$89.00
Nokia 6110 5110 Original Ext Li-Ion	E 2169	$185.00
Nokia 6110 5110 Extended NiMH	E 2171	$79.95
Nokia 6110 5110 450ma NiMH	E 2172	$89.95
Nokia 5110 5110 Vibra	E 2173	$179.00
Ericsson 788/768 Genuine NiMH	E 2266	$76.00
Panasonic G450 Extended NiMH	E 2361	$79.95
Panasonic G450 Slim NiMH	E 2362	$89.95
Panasonic G600 400ma Li-Ion	E 2394	$129.00
Panasonic G600 650ma NiMH	E 2396	$89.00
Panasonic G600 1300ma Li-Ion	E 2397	$149.00
Motorola D160 NiMH	E 2411	$69.00
Motorola Jazz 600ma NiMH	E 2412	$55.00
NEC Fido/2 NiMH Slim	E 2561	$69.95
NEC Fido/2 Extended NiMH	E 2562	$69.95
StarTAC Primary NiMH	E 2611	$69.00
StarTAC Back-up NiMH	E 2612	$49.00
Philips Fizz Slim NiMH	E 2962	$59.95
Philips Fizz NiCad	E 2961	$39.95
Ericsson 688/628 Extended NiMH	E 3161	$69.95
Ericsson 688/628 Slim NiMH	E 3162	$69.95
Philips Genie 1100mAh Li-Ion	E 3357	$174.00
Ericsson 237/337/388 Slim NiMH	E 3511	$79.95
Ericsson 237/337/388	E 3514	$69.95
Nokia 2110 Slim NiMH	E 3611	$79.95
Nokia 2110 Ext NiMH	E 3614	$79.95
Nokia 3810 Genuine Ext Li-Ion	E 3756	$159.00
Nokia 3810 Genuine Slim Li-Ion	E 3757	$129.00
Nokia 8110 Genuine Ext Li-Ion	E 3758	$149.00
Nokia 8110 Genuine Slim Li-Ion	E 3759	$129.00
Nokia 3810 550Ma NiMH	E 3771	$79.95
Nokia 3810 NiMH Extended	E 3773	$89.95
Nokia 1600/10/30 Slim NiMH	E 3813	$79.95
Philips Twist/Spark Slim NiMH	E 3862	$89.00
Philips Twist Genuine 600ma NiMH	E 3863	$58.00
Nokia 2010 Ext NiCad	E 3912	$44.95
Motorola TAC NiMH Extended	E 5313	$48.00
Motorola TAC NiMH Slim	E 5314	$108.00

How to maintain your battery

When charging a brand new battery or recharging a battery that has not been used for several months, your charger may indicate that the battery has been fully charged after only a few minutes. At this point, do not stop the charging process but allow the charger another 10 hours before stopping the charge. The battery will require between three and five charge/discharge cycles to achieve its rated capacity.

Also:

- Make sure the battery is fully charged before use
- Charge overnight if new or unused for a long period of time
- Clean the battery and terminals with a clean, soft dry cloth
- The battery may be warm during use or recharging, this is normal
- Natural discharge may occur during long storage periods
- Take care not to drop the battery or subject it to strong shocks

Data Products

Description	Cat No.	Price
Sagem RD750T Data Cable	E 2059	$69.00
Nokia 5110 6110 Data Suite V.2	E 2165	$199.00
Nokia 6110 Car Kit Data Cable	E 2189	$45.00
Alcatel OT View PC Card	E 2238	$499.00
Ericsson DI 27 Infrared Modem	E 2265	$199.00
Motorola CELLect 3 PC Card	E 2475	$995.00
Nokia 8110 3810 Data Suite	E 3619	$199.00
Philips Spark Mobile Data Card	E 3875	$660.00
Philips Genie Mobile Data Card	E 3877	$599.00

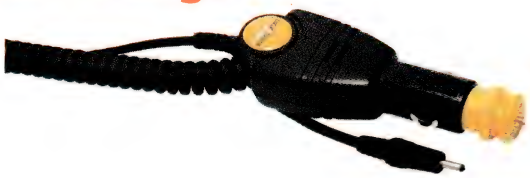
Desktop Chargers Conditioners

Description	Cat No.	Price
Samsung SGH250	E 1567	$79.00
Nokia 6110 5110 Genuine	E 2177	$99.00
Nokia 6110 5110 Dual Slot	E 2187	$69.00
Alcatel OT View Original	E 2236	$32.95
Ericsson Original 768/788	E 2251	$119.95
768 788 Dual Slot	E 2252	$69.00
Panasonic G500 G450 Dual Slot	E 2357	$69.00
Panasonic G600 Dual Slot	E 2389	$89.00
NEC Fido Dual Slot	E 2587	$79.00
Motorola StarTAC Dual Slot	E 2637	$79.00
Ericsson 688 628 Dual Slot	E 3187	$79.00
Original Nokia 3810 Dual Slot	E 3764	$94.00
Nokia 3810 Dual Slot	E 3765	$69.00
Nokia Dual Slot 1600/10/30	E 3839	$69.00
Philips Twist Original	E 3866	$89.00
Motorola TAC Dual Slot	E 5437	$79.00

240V Plug Packs

Description	Cat No.	Price
Nokia 6110/5110 Original AC Adaptor	E 2164	$65.00
Alcatel OT View Original AC Adaptor	E 2234	$34.95
Panasonic G600 AC Adaptor	E 2384	$49.00
Cigarette Socket Convert 24v to 12v	E 3112	$43.50
Nokia Series 2 AC Adaptor	E 3208	$59.95
Philips Genie AC Adaptor	E 3367	$89.00
Philips Twist/Spark AC Adaptor	E 3867	$60.00
Twist Genuine AC Adaptor	E 3886	$54.00
Nokia Series 1 AC Adaptor	E 7208	$59.95

In Car Chargers



Description	Cat No.	Price
Samsung SGH250	E 1562	$39.95
Sagem RD750T Original	E 2057	$59.00
Nokia 6110 5110	E 2166	$29.95
Nokia 6110 5110 Original	E 2168	$59.00
Alcatel OT View	E 2235	$26.50
Panasonic G500 G450	E 2356	$29.95
Panasonic G600	E 2398	$49.00
Motorola D160	E 2406	$29.95
Motorola Jazz	E 2413	$32.00
Panasonic G520	E 2326	$39.00
NEC Fido	E 2506	$22.00
Motorola StarTAC	E 2606	$29.00
Motorola StarTAC Original	E 2651	$89.00
Ericsson 628/788/688	E 3156	$39.95
Philips Fizz	E 2956	$19.95
Philips Genie	E 3356	$69.00
Ericsson 388/318	E 3506	$29.95
Nokia Series 2	E 3806	$29.95
Philips Twist/Spark	E 3856	$26.50
Motorola TAC	E 5306	$18.50
Nokia Series 1	E 7106	$29.95

Handsfree Kits

Description	Cat No.	Installed Price
Samsung SGH250 H/free Kit	E 1568	$269.00
Sagem RD750T H/free Kit	E 2090	$349.00
Nokia 6110 5110 H/free Kit	E 2190	$395.00
Nokia 5110 6110 H/free Upgrade Kit	E 2191	$279.00
Maxi H/free Kit for Nokia 5110/6110	E 2195	$199.00
Ericsson 788/768 Full Duplex H/free	E 2290	$429.00
Panasonic G500/G450 H/free Kit	E 2390	$439.00
Panasonic G600 H/free Kit	E 2391	$369.00
Panasonic G600 Ezyfit H/free	E 2392	$239.00
NEC Fido H/free Kit	E 2590	$459.00
Motorola StarTAC H/free Kit	E 2640	$599.00
Ericsson 628/688 Full Duplex H/free	E 3190	$429.00
Philips Genie H/free Kit	E 3390	$399.00
Nokia 1610/1630/1600	E 3840	$229.00
Nokia 2110/2010	E 3640	$229.00
Nokia 2110e with extra battery and desk charger	E 3644	$299.00
Nokia 3810/8110	E 3790	$299.00
Nokia 3810 Maxi H/free Kit	E 3791	$229.00

Replacement Antennas

Description	Cat No.	Price
Nokia 6110/5110 Antenna	E 2167	$24.00
Panasonic G450 Antenna	E 2367	$27.00
Philips Fizz Retractable Antenna	E 2957	$18.50
Ericsson 238/337 Stuby Antenna	E 3507	$22.90
Nokia 2110/2010 Retractable Antenna	E 3607	$24.50
Nokia 2110e Retractable Antenna	E 3657	$26.50
Nokia 3810/8110 Stubby Antenna	E 3755	$23.00
Nokia 1610/1630 Button Antenna	E 3807	$23.70
Philips Twist/Diga Antenna	E 3857	$21.95
Motorola Flare Retractable Antenna	E 2907	$12.95
Motorola 82/8400 Retractable Antenna	E 3007	$12.95
Motorola 1-888/7200 Retractable Antenna	E 3407	$12.95

Portable Handsfree Kits

Portable Handsfree Kits simply plug into the phone and have an earpiece with built-in microphone.

Description	Cat No.	Price
Voyager Universal H/free Kit	E 3104	$12.95
Sagem RD750T Original W&T	E 2056	$89.00
Nokia 6110 5110 W&T	E 2192	$59.00
Nokia 6110 5110 Genuine W&T	E 2193	$89.00
Alcatel OT View W&T	E 2237	$38.00
Panasonic G600 W&T	E 2393	$59.00
Panasonic G450 W&T	E 2395	$29.00
Motorola Jazz W&T	E 2414	$29.00
NEC Fido 2 W&T	E 2595	$19.95
H/free 2000 Universal Headset	E 3096	$19.00
Original Ericsson 788 628/88 W&T	E 3192	$89.95
Philips Genie W&T	E 3358	$89.00
Ericsson 788 688 628 W&T	E 3395	$45.00
Ericsson 389 337 318 W&T	E 3546	$69.00
Original Nokia 1600/8110/3810 W&T	E 3844	$99.00
Nokia 1600/310/8110 W&T	E 3845	$79.00
Philips Twist W&T	E 3865	$79.00
Nokia 5110, 6110 3in1 H/free	E 2188	$89.00
Ericsson 768,788 3in1 H/free	E 2288	$89.00
Panasonic G520 Walk&Talk H/free	E 2325	$59.00
Philips Fizz Walk&Talk H/free	E 2994	$39.00
Ericsson 628,688 3in1 H/free	E 3188*	$89.00
Philips Spark Walk&Talk H/free	E 3895	$39.00

Mounted Antenna

Description	Cat No.	Price
On Glass GSM/Digital Ant 5db	E 3124	$39.00
5db Universal Whip & Base	E 3126	$22.95
Roof/Hole Mount Cellular Antenna	E 3133	$23.50
3dB Universal Whip & Base	E 3139	$20.50

At Dick Smith Electronics we understand the increasing pressure on people to have a computer and upgrade to the latest and greatest. We also recognise the changing needs of our customers and marketplace. If you are looking for top performance, speed, memory or capacity, Dick Smith Electronics has the combination to suit you. We sell top brands at very competitive prices and offer a huge selection of both notebook and desktop PCs. Our range keeps up-to-date with the latest technological advances in the ever-changing computer market. So call in today and talk to our expert & friendly staff who can assist you with any questions you may have and selections available. Choose a computer from the biggest brands in PCs: IBM, Compaq, Hewlett Packard, Toshiba, DSX and Sharp. Whether it's hardware or software you're looking for – our staff are more than happy to help you.

IBM COMPAQ HEWLETT PACKARD Expanding Possibilities TOSHIBA DSX SHARP

CUSTOM BUILD YOUR COMPUTER WITHOUT LIFTING A FINGER.

Built To Order

If you're looking for something more specific, and want a little more say in your computer's components, designing your own using our unique Built-to-Order computer system is the answer.

There are literally thousands of combinations to choose from, it's so easy! Select from an easy-to-follow on-screen menu on the web or in our stores. If you need assistance our staff are more than happy to help.

We can build to the specifications you select and will normally deliver anywhere in Australia* within eight working days.

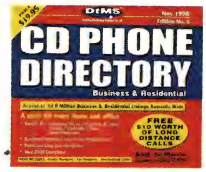
www.dse.com.au

DICK SMITH ELECTRONICS

That's where you go!

(Freight charges apply). * 'Built-to-Order' computers may not be available from some authorised stockists.

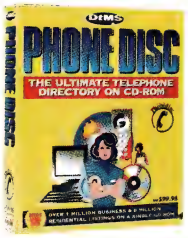
Australian National Phone Directory



Why leaf through cumbersome phone books when you can search by name, business, business type or location as quick as a flash.
XS4913

NEW FOR '99 **$19.95**

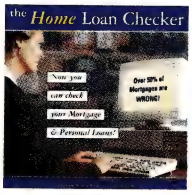
Australian Phone Disc



Speedy search functions include reverse search by telephone number on both business and residential listings and wild card 'sounds like' find facility.
XS4914

NEW FOR '99 **$99**

The Home Loan Checker



Don't pay more than you have to! Check for mistakes on your mortgage payments and personal loans on CD.
XS4898

NEW FOR '99 **$19.95**

Telstra White Pages

Includes names, addresses, telephone, fax and mobile information from 55 White Pages directories. Create your personal directory with up to 1,000 entries.
XS4948

NEW FOR '99 **$19.95**

Check 2000 Check and Fix

Check 2000 Check and Fix, repairs and fixes year 2000 hardware (BIOS) problems quickly and easily, then locates problems in Operating Systems and shows you how to fix them.
XS4996

NEW FOR '99 **$24.95**

Check 2000 PC Deluxe

Test your BIOS and get pass/fail results. Also does an inventory of your application programs and includes a data scanner which drills down to individual cells and fields in popular spreadsheets and databases.
XS4992

NEW FOR '99 **$99**

South Park Desktop Kit

Oh my God, they killed Kenny! Middle America's worst nightmares come to life in screen savers and other desktop kit features.
XS4990

NEW FOR '99 **$39.95**

Family Tree Maker 2 CD set

The easiest and most complete resource for building your family tree. Step-by-step guide traces ancestors in the US and abroad. Exclusive internet tools and professional quality printouts.
XS4896

NEW FOR '99 **$69.95**

Dream Home 3D CD

Great for those who love redesigning. Enabling you to renovate on screen before you actually knock out that wall, this entry level CD is aimed at the home handyman.
XS4923

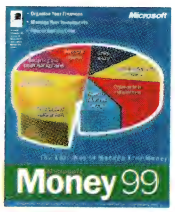
NEW FOR '99 **$49.95**

Floorplan 3D Design Suite CD

One for the professional handyman. Design and visualise your home, office and garden. Includes more than 100 designs and tools.
XS4883

NEW FOR '99 **$119.95**

Microsoft Money



Eliminate debt! Complete home financial package enables you to balance your chequebook, track your money, get a monthly report on your finances and more.
XS4912

NEW FOR '99 **$59**

Quicken

Don't throw all those bank statements into a drawer, keep track of them with this popular personal finance package. Tracks and manages shares and investment portfolios, mortgages, finances and bank accounts.
XS4843

NEW FOR '99 **$79.95**

Quicken Deluxe XS4869 $99

Masterclips 150,000 CD

Clip away to your heart's desire with more than 100,000 pictures and some 41,000 photographs.
X 8911

$79.95

Masterclips 303,000

High quality premium images to meet home or business publishing needs. Includes 126,000 vector images, 47,000 black and white drawn images, 55,000 Masterphotos, 54,800 Web Art images, 2,000 MasterFonts, 180 video and animation clips and 4,600 sound affects.
XS4764

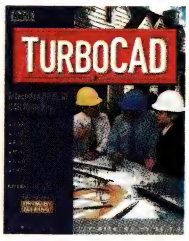
NEW FOR '99 **$129**

Masterclips WebArt 100,000 CD

Whether you are a novice web designer or a pro, Masterclips Web Art gives you the professional results you need. Choose from thousands of clipart and photo images with exclusive theme sets.
XS4935

$99.95

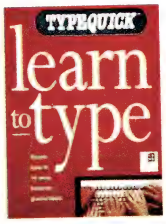
TurboCad CD



Professional tool for drawing, designing and drafting. Features over 250 logically grouped CAD tools, fully integrated 2D/3D functionality, over 12,000 CAD symbols and 1,000 editable house plans.
XS4812

$199.95

Typequick for Windows CD



Complete this course of 10 one hour lessons and you'll be using ten fingers to type. Step-by-step reinforcement, extra exercises to overcome weaknesses and progress reports.
X 4770

$89

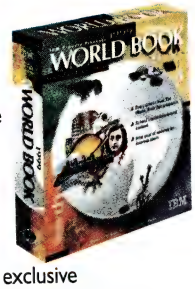
Microsoft Encarta Deluxe

Hook into tomorrow's way to learn with this powerful resource. Comprehensive content, more than 1500 pieces of media, new web links and side bars. XS4325

Microsoft Encarta World Atlas
XS3257 **$89**

NEW FOR '99 **$139**

IBM World Book



Comprehensive reference product. New to this edition are innovative 360° virtual reality views of exclusive photographs. All ages and grades.
XS3390

NEW FOR '99 **$89.95**

FineReader OCR Gold Standard

Latest version of FineReader OCR software scans type more effectively. Retains document formatting such as single and multiple column texts and recognises up to 40 language texts.
XS5014

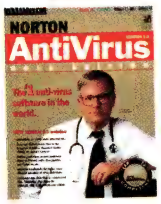
NEW FOR '99 **$299**

Dr Solomon's Deluxe CD

Provides the most comprehensive and advanced line of defense against the spread of most viruses by detecting and destroying them. Detects and repairs over 13,000 viruses. Voted no.1 by PC User magazine.
XS4997

NEW FOR '99 **$99.95**

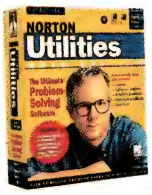
Norton Anti-Virus Gold Edition



Quarantine feature safely stores infected files, "scan and deliver" sends files to Symantec Anti-virus Research Centre (SARC) for fast analysis, improved virus detection in compressed files. Windows 95/98 and NT4.0 compatible.
XS4781

NEW FOR '99 **$99.95**

Norton Utilities Gold Edition



Features Norton Crashguard deluxe, Norton anti-virus starter edition, Norton optimisation wizard to boost system performance, Norton utilities integrator and Norton Zip rescue.
XS4664

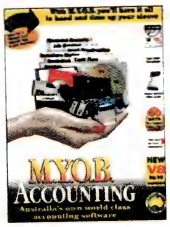
NEW FOR '99 **$149**

Check-it 98 Diagnostic Kit

Troubleshoot your PC with this software package. Includes Check-It 98, Fastmove, Check-It Net Optimizer, Check-It year 2000 hardware test & fix, portable Check-It DOS Diagnostics and Loopback plugs & file transfer cable.
XS4966

NEW FOR '99 **$199.95**

MYOB Accounting



New features in Mind Your Own Business include OfficeLink, to share accounting information with popular software packages, improved bank account reconciliation, greater flexibility for customer and vendor inquiries. XS4747

NEW FOR '99 **$369**

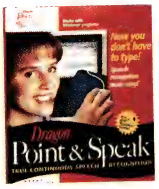
MYOB Accounting with Payroll XS4799 **$529**
MYOB Test Drive XS4775 **$9.95**

Winfax Pro CD

No more jumping up from your computer to send a fax! Sends multiple laser-quality faxes and pre-programs the time you want it sent. Includes network fax sharing for workgroups.
XS4785

NEW FOR '99 **$169**

Dragon Point and Speak



Dictate into almost any Windows application simply by clicking your mouse and speaking. Connect and edit at anytime with a built-in vocabulary of 30,000 words. Headset microphone included.
XS4918

NEW FOR '99 **$129**

Dragon Naturally Speaking Preferred

Dictate into your computer and play back your own dictation! Features true continuous speech with 95% accuracy according to user reports. Compatible with Microsoft Word 97 and Corel WordPerfect Suite 8.
XS4859

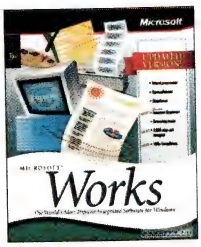
NEW FOR '99 **$349**

Microsoft Publisher

Ensure a consistent and professional look across materials. Includes 10,000 clip-art pieces, 175 fonts, 600 photographs, sound and animated GIFs. Includes web enhancements and web-site wizard.
XS4634

Microsoft NEW FOR '99 **$179**

Microsoft Works



Provides the core tools for easy home computing, including a word processor, spreadsheet, database, drawing and communication tools. Comes with Internet Explorer, 7,000 clip art images & 100 new templates.
XS4909

Microsoft NEW FOR '99 **$119**

Microsoft Office Professional 2000 Upgrade

NEW FOR '99

Get ahead of the game with the latest version of the classic Office Professional including Microsoft Word, Excel, PowerPoint, Access and Outlook. Now includes Publisher 2000 and Small Business Tools.
XS6001

Contact your nearest store for the latest price

Microsoft

** All software is on PC compatible CD-ROM unless otherwise stated.*

Modems may come with free Internet access. Offers may vary by product and during the effective period of this catalogue.

Maestro Modem

Low priced access to the Internet!
33.6K data/14.4 fax external modem with answering machine facility and comes complete with communications software.
XH1033 **$99**

56K Spirit Ranger

Fast speed internal modem with speakerphone facility. Runs off your PC. Suits a Pentium 166 and above.
XH1819 SPIRIT MODEMS **$99**

Maestro 56K Flex Modem

Browse faster with this 56K SVD modem. For Windows 95 and 98 only. Australian made with 12 months warranty and unlimited technical support.
XH1046 **$139**

On the Net Yet?

Hook into the world's greatest information resource now! Essential for business, school projects or sending e-mails and photos around the world.
Simply buy a modem, sign-up with an Internet Service Provider (see Big Pond Internet Companion below), log in with your computer, dial out through your phone line and you're on!
Use your browser to look at web pages and an e-mail client to send e-mails.

Telstra Big Pond Internet Companion

With a bonus 70* hours Internet access, guide to surfing the net and Internet software.
**Normal call charges apply. Valid credit card required. To be used within one month.*
XS4735

NEW FOR '99 **$9.95**

56K (560SP) External Fax/Modem

With speakerphone, answering machine and voice functions. Supports 56K Flex and V.90. Comes with bonus headset and mic.
XH1000 SPIRIT MODEMS **$159**

Maestro 56K Jetstream V.90

This SVD fax/data/voice modem comes with data fax voice software on CD and free unlimited technical support. Australian made with a 2 year warranty.
XH1045 **$179**

Get Online Anytime with Microplex

NEW FOR '99

Pre-pay your Internet account to stop over spending on the net! A fantastic idea that allows people, on any budget, to surf the net. No credit card required so sign up today!

15 hour Internet Access Card
X 6461 $24.95* 1 month access

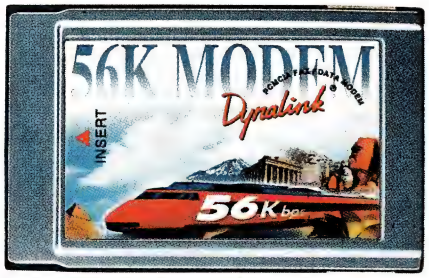
40 hour Internet Access Card
X 4915 $39.00* 1 month access

10 hour Internet Access Card
XS4920 $19.95* 3 month access

100 hour Internet Access Card
XS4921 $99.00* 3 month access

**Normal call charges apply.*

MICROPLEX



Dynalink 56K modem

This PC card modem is one of the fastest available for Notebooks. Also compatible with applicable Cassiopeia models.
XH1010 **$199**

Scorpion PCMCIA 56K Modem

Fast route to the Internet for Notebook computers. 56K data/14.4fax PC card type modem. Comes with a 2 year warranty.
XH1044 SPIRIT MODEMS **$229**

Iomega External Zip Drive

Transfer data effectively with this portable Zip drive. Ideal back-up for both desk top and notebook computers. Easy parallel port installation. You can piggy back other devices such as printers in a single parallel port in your computer. Stores 100Mb information on zip disks.

XH3935/X 6661

$299

Imation External Drive LS-120

Has 120Mb storage capacity using SuperDisk diskettes and a dual compatability drive which reads & writes existing standard floppy disks. Up to five times faster than conventional drives and operates on Windows 95, 98, 3.1 or NT.

XH0072

$249

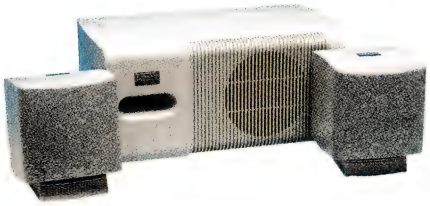
Aopen 36X CD-ROM Drive

This CD-ROM drive features a 5400KB/sec data transfer rate, user-friendly front panel with audio play/skip track control, can read CD-RW media data and is vertically mountable. XH6978

Bonus Norton Anti-virus V4 and Virtual Drive software (J 0152).

$159

Supply may be limited. Check nearest store for latest offer.



Altec Lansing Speakers With Sub Woofer

This power cube multimedia speaker system has high quality, high performance three-piece system. Satellite speakers are magnetically shielded and a powerful subwoofer (20 watts at 0.8% THD) is included. Electronic up/down controls. Two 3-inch shielded full-range speakers, satellite speakers power is 6 watts at 0.8% Total Harmonic Distortion (THD).

X 3474

$179

Video Director Studio 400

Studio 400 combines digital & linear editing technology, providing near-frame accurate editing and using very little hard disk space. It has over 200 professional titling styles and requires only 150MB of hard disk space for 1 hour of captured video.

XH4613

$749

Logitech

Quickcam Home

Capture video & still images with this Quickcam. Features Plug & Play USB for Windows 98 only. Comes with built-in microphone and software to capture still video, send video email, make video phone calls on the Internet, enhance & edit images and create time lapse. Up to 30 frames per second video frame rate and stop motion animation.

XH4651

$249

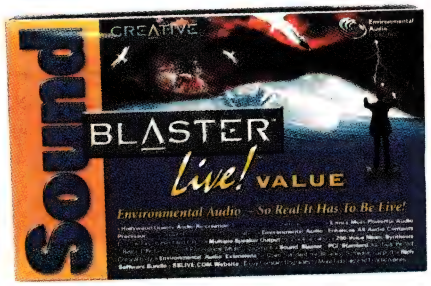
Spirit TV Tuner/Capture Card

Combination TV tuner and capture card. Watch TV on your computer with this UHF/VHF TV tuner card. View full screen or smaller.

XH6510

$149

SPIRIT MODEMS



Creative SoundBlaster Live Value

This package, Sound Blaster Live Value, provides audio fidelity that rivals movie theatres with digital sound. It produces surround sound audio on your PC with built in support for two or four speakers.

XH4654

CREATIVE
CREATIVE LABS

$299

Interact Multimedia Headset

Shielded cable for noise-free use and built-in mic make this ideal for voice recognition software and voice over presentations. Full range stereo headphones.

XH4602

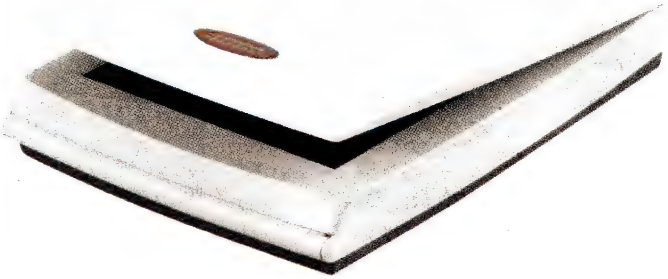
$24.95

OptiCam 300 USB Camera

Fast frame rate for Internet video conferencing. Also captures still images.
XH4677

Plustek

$149



Scanmagic 4800 Colour Flatbed Scanner

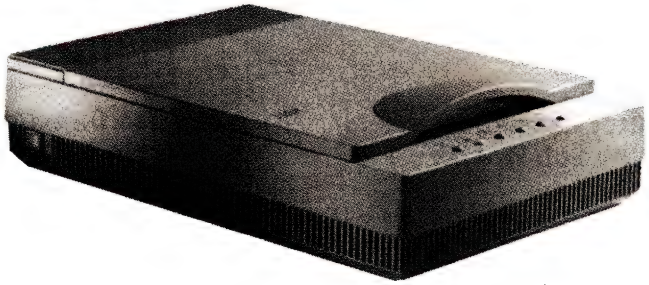
Colour flatbed, single pass scanner with EPP (parallel port) interface and a 300 optical resolution (4800dpi max). Features ULEAD IPhotoExpexpress, and Xerox TextBridge optical recognition software. Can scan single documents, books, newspapers, reports, photos and more.
XH1528

HEWLETT PACKARD
Expanding Possibilities

HP Scanjet 3200

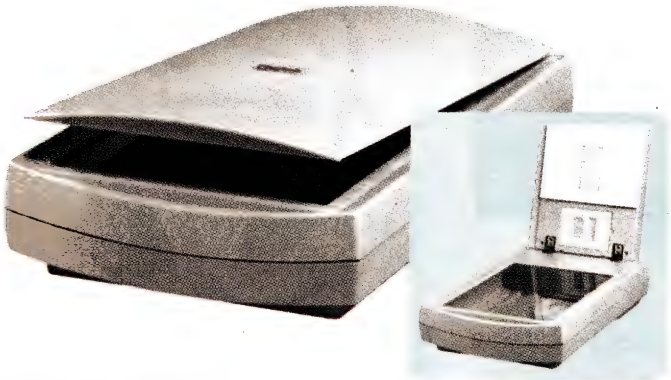
HP quality and reliability at an affordable price. Features intuitive scanning software which enables you to scan directly to an application (eg Word). With 600dpi (optical), up to 9600dpi via software interpolation. Install via your parallel port.
XH1537

IBM



IBM IdeaScan Colour Scanner

Features one button access for preview, scan, fax & e-mail, 36-bit colour depth and 600 x 1200dpi optical resolution or 9600 x 9600dpi enhanced resolution. Software includes Xerox TextBridge Classic OCR and PhotoStudio Suite.
XH1529



Optic Pro 9636T Scanner

Amazing power and incredible scanning at 600 x 1200dpi resolution and 9600dpi maximum interpolated resolution. This top-of-the-range 36-bit Optic Pro scanner has TWAIN compliance, features EPP (Enhanced Parallel Port), a scan area of 216 x 297mm and transparency scanning capabilities. Impressive software bundle included.
XH1507

HEWLETT PACKARD
Expanding Possibilities

HP Scanner 4100c (USB)

Get scanning in minutes! This flatbed one-pass scanner has easy plug-and-play USB connectivity. Uses HP Intelligent Scanning Technology and has separate scan and copy buttons. Scans at 600dpi resolution, 1200dpi enhanced with a 36-bit colour image processor.
XH1521

Please check your nearest store for current pricing.

Canon

This Japanese market leader has led the way in developing printer technologies such as Photorealism and P-POP. PhotoRealism's seven colour printing process uses high and low density inks to produce 24 saturation levels per colour per dot. P-POP, which is unique to Canon, bonds an invisible "optimiser" to the plain paper before inks are applied. The inks in turn bonds to the optimiser with both substances fusing to the paper while drying.

HEWLETT PACKARD

Expanding Possibilities

This US company produces high quality printers which are popular among SOHO users. HP uses PhotoREt II colour layering technology for brilliant photo-quality colour on any paper, while Colorsmart II technology provides perfect colour automatically, so what you see on screen is what you print. Crisp rich black text gives your documents that professional look, while fast-drying HP inks provide smudge-resistant text and photos.

LEXMARK™

Lexmark offer simplicity and service from their inkjet printer range. This US company provides one year hassle-free home replacement called LexExpress, plus a free parallel cable worth $25 with every printer purchase, laser crafted printer heads, industry leading paper handling and true plug and play set up. Easy!

***Contact your nearest store for the latest printers and pricing.*

EPSON

Epson has a strong reputation for graphics with high-end inkjet printers. This Japanese company uses Picture Imaging System technology, comprising of four elements: 1) Micro Piezo printheads which control the size and placement of ink dots, enabling up to 1440 dpi resolution. 2) Acu Photo Halftoning, a 32-bit image processing system in Epson stylus printer drivers. 3) QuickDry inks using high concentration dyes with brilliant colours which dry in 10 milliseconds. 4) Photo Quality Papers.

Switch Boxes

Hook up more than one printer to one computer, or more than one computer to one device. Selecting different devices is as easy as flicking a switch. You'll never have to mess around swapping cables from one device to the other again.

Connect:

Up to three printers to one computer or vice versa
X 3575 Switch Box DB25 ABC **$54.95**

One printer and up to three computers or vice versa
X 3576 Switch Box Centronics ABC **$54.95**

Up to two printers to one computer or vice versa
X 3579 Switch Box DB25 AB **$44.95**

Four printers to one computer or vice versa
X 3586 Switch Box DB25 ABCD **$64.95**

Calidad Printer Ribbons

To Suit	Cat No.	Price
Apple Image Writer, CITOH 8510	X 3261	$15.95
Brother 1324/1824/1924L	X 3324	$19.95
Citizen GSX 120/140/220/240 Colour	X 3330	$32.95
Citizen GSX 140/240/1200 Mono	X 3321	$14.95
DSE 135, Tally SP80, BMC BX80, Shinwa CPA80	X 3231	$22.95
DSE 2410, Epson LQ/LX200/400/800	X 3216	$14.95
DSE 2415, Epson LQ1000	X 3221	$14.95
Epson LQ100	X 3267	$14.95
Fujitsu DL900/1100/1200 Black	X 3169	$16.95
OKI ML 172/182/184/192/320/390	X 3239	$14.95
Panasonic Super 'S' 1080/1090	X 3227	$15.95
Seikosha SL-60, SL-90	X 3338	$16.95
Star LC10 Colour	X 3297	$29.95
Star LC10/20, NX1000 Mono	X 3296	$14.95
Star LC24-30/LC240C Mono	X 3159	$24.95
Star LC24-30/LC240C Colour	X 3160	$32.95
Star LC24-10/20/100/200	X 3232	$14.95
Star LC24-200 Colour	X 3322	$29.95

Laser Toner

	Supplier Code	Cat No.	Price
HP Laserjet 4L	92274A	X 0971	$149.00
HP Laserjet 5L/6L	C3906A	X 1079	$129.00
Brother HL600/631, 5000P	TN-100HL	X 2179	$79.00

Original Ink Cartridges (with print head)

To Suit CANON	Colour	Supplier Code	Cat No.	Price
BJ10/20/Starwriter	Black	BC01	X 3233	$54.95
BJ200/230/BJC210/240	Black	BC02	X 5586	$54.95
BJC210SP	Black	BC03	XH2008	$59.95
BJC210/210SP/240	Colour	BC05	X 2193	$69.95
BJ30/BJC70/80	Black	BC10	X 5320	$74.95
BJC70	Colour	BC11	X 5855	$84.95
BJC4000 Series/BJC5500	Black	BC20	X 5489	$64.95
BJC4000 Series/BJC5500	Colour	BC21	X 5852	$89.95

To Suit HEWLETT PACKARD	Colour Code	Supplier	Cat No.	Price
Deskjet 400/500 Series, DJ600/OJ	Black	51626A	X 0743	$62.95
Deskjet 300/400/500 Series	TRI-Colour	51625A	X 0744	$64.95
Deskjet 600 Series	Black	51629A	X 2858	$64.95
Deskjet 300/Portable Series	Black	51633M	X 2844	$62.95
Deskjet 820/720c/850/870/1150	Black	51645A	X 3559	$62.95
Deskjet 820/850/870/1150c	Colour	51641A	X 3598	$64.95
Deskjet 720c/1120c	Colour	C1823A	XH2031	$69.00
Deskjet 400/500 series (halfsize)	Black	51626G	XH2050	$39.95
Deskjet 600 series (halfsize)	Black	51629G	XH2051	$39.95
Deskjet 720c/820/870/1150 (halfsize)	Black	51645G	XH2052	$41.95

To Suit LEXMARK	Colour	Lexmark Code	Cat No.	Price
WW150/1000/1100/1020/2030/2050	Black	13620HC	XH2030	$59.95
WW150/1000/1100/1020/2030/2050	Black Waterproof	13400HC	XH2028	$64.95
WW150/1000/1100/1020/2030/2050	TRI-Colour	13619HC	XH2029	$69.95
5000/CJ7000/7200	Black	12A1970	XH2019	$59.95
5000/CJ7000/7200	TRI-Colour	12A1980	XH2018	$79.95
Photo upgrade kit for CJ2030	Colour	11B5703	XH0036	$79.95

Printer Cartridges

Printer Cartridges

Original Cartridges (with print heads) refer to the cartridges produced by the company that produced the printer. These cartridges include the print head, and slot into its matching printer. Original Ink Replacement Cartridges are those cartridges produced by the printer company and slot into the Original Cartridges (above). Calidad Compatible Ink Replacement Cartridges are all produced by Calidad and are an alternative to the Original Ink Replacement Cartridges. These also do not include the print head and slot into the Original Cartridge.

Ink Jet Refills

These are all produced by Calidad and are suitable to refill Original Ink Cartridges.

Some products may not be available all stores but may be ordered.

Original Ink Cartridges

To Suit CANON	Colour	Supplier Code	Cat No.	Price
BJC4100/4200/4550	Black	BCI21BK	X 5707	$16.95
BJC4100/4200/4550	TRI-Colour	BCI21C	X 5708	$39.95
BJ30, BJC70/80 – Lge (Pk3)	Black	BCI10BK	X 5718	$29.95
BJC70/80 – Sml (Pk3)	Black	BCI11BK	X 5724	$20.95
BJC70/80	TRI-Colour	BCI11C	X 5719	$39.00

To Suit EPSON	Colour	Epson Code	Cat No.	Price
Stylus 200/Colour II/IIs/820	Black	SO20047	X 4785	$39.95
Stylus 400/500/600	Black	SO20093	X 4329	$44.95
Stylus 200/500	TRI-Colour	SO20097	X 4328	$55.00
Stylus 800/1000	Black	SO20025	X 3197	$29.95
Stylus Colour II/IIs/820/1500	TRI-Colour	SO20049	X 4786	$55.00
Stylus 400/600/800	TRI-Colour	SO20089	X 8381	$49.95
Stylus Colour Pro	Black	SO20034	X 4781	$44.95
Stylus 300	4 Colour	SO20138	X 7539	$39.95
Stylus Colour 800/1520	Black	SO20108	X 8318	$59.95
Stylus Colour Photo/photo 700	Colour	SO20110	X 7397	$44.95
Stylus Colour 440/640	Black	SO20187	XH2053	$49.95
Stylus Colour 740	Black	SO20189	XH2054	$59.95
Stylus Colour 440/640/740	Colour	SO20191	XH2055	$55.95

Calidad Replacement Ink Cartridges

Compatible for CANON	Colour	Calidad Code	Cat No.	Price
BCI21BK	Black	936-BK	X 5853	$12.95
BCI21C	TRI-Colour	936-COL	X 5854	$26.95
BCI10BK	Black	940-BK	X 5856	$6.95
BCI11BK	Black	941-BK	X 5857	$9.95

Compatible for EPSON	Colour	Calidad Code	Cat No.	Price
SO20025	Black	951-BK	X 5873	$19.95
SO20047	Black	955-BK	X 5876	$26.95
SO20049	TRI-Colour	955-COL	X 5877	$39.95
SO20034	Black	952-BK	X 5874	$24.95
SO20036	TRI-Colour	952-COL	X 5875	$49.95
SO20093	Black	958-BK	X 9365	$24.95
SO20097	TRI-Colour	958-COL	X 9366	$29.95
SO20108	Black	960-BK	XH2000	$19.95
SO20089	TRI-Colour	960-COL	XH2001	$24.95
SO20138	Colour	963-FC	XH2046	$34.95

Calidad Ink Refill Kits

Compatible for CANON	Colour	Calidad Code	Cat No.	Price
BC01/02 (to suit BJ10/20/200/230,BJC210/240)	Black	930-BK	X 5878	$9.95
BC05 (to suit BJC210/240)	Cyan	942-CY	X 3409	$14.95
BC05 (to suit BJC210/240)	Magenta	942-MG	X 3411	$14.95
BC05 (to suit BJC210/240)	Yellow	942-YL	X 3412	$14.95
BC20 (to suit BJC4100/4200/4550)	Black	938-BK	X 5879	$12.95
BCI21BK (to suit BJC4100/4200/4550)	Black x2	937-BK	X 5880	$12.95
BCI21C (to suit BJC4100/4200/4550)	Cyan	937-CY	X 5881	$19.95
BCI21C (to suit BJC4100/4200/4550)	Magenta	937-MG	X 5882	$19.95
BCI21C (to suit BJC4100/4200/4550)	Yellow	937-YL	X 5883	$19.95
BJC210SP	Black	943-BK	XH2039	$12.95

Compatible for EPSON	Colour	Calidad Code	Cat No.	Price
SO20025 (to suit Stylus 800/1000)	Black	950-BK	X 5937	$14.95
SO20047 (to suit Stylus Colour II/IIs)	Black	956-BK	X 3422	$14.95
SO20049 (to suit Stylus Colour II/IIs)	Cyan	956-CY	X 3423	$14.95
SO20049 (to suit Stylus Colour II/IIs)	Magenta	956-MG	X 3424	$14.95
SO20049 (to suit Stylus Colour II/IIs)	Yellow	956-YL	X 3425	$14.95

Compatible for HEWLETT PACKARD	Colour	Calidad Code	Cat No.	Price
51633A (to suit Deskjet 300	Black	910-BK	X 5943	$14.95
51626A (to suit Deskjet 400/500 Series)	Black	911-BK2	XH2035	$14.95
51625A (to suit Deskjet 300/400/500 Series)	Cyan	913-CY	X 5944	$14.95
51625A (to suit Deskjet 300/400/500 Series)	Magenta	913-MG	X 5945	$14.95
51625A (to suit Deskjet 300/400/500 Series)	Yellow	913-YL	X 5946	$14.95
51629A (to suit Deskjet 600 Series)	Black	916-BK2	XH2036	$14.95
51649A (to suit Deskjet 600 Series)	Cyan	917-CY	X 3441	$14.95
51649A (to suit Deskjet 600 Series)	Magenta	917-MG	X 3443	$14.95
51649A (to suit Deskjet 600 Series)	Yellow	917-YL	X 3444	$14.95

Compatible for LEXMARK	Colour	Calidad Code	Cat No.	Price
1380620 (to suit WW150/1000/1020/2030/2050)	Black	954-BK	X 6899	$19.95
1380619 (to suit WW150/1000/1020/2030/2050)	Cyan x2	954-CY	X 6900	$14.95
1380619 (to suit WW150/1000/1020/2030/2050)	Magenta x2	954-MG	X 6903	$14.95
1380619 (to suit WW150/1000/1020/2030/2050)	Yellow x2	954-YL	X 6909	$14.95

Some products may not be available at all stores but may be ordered.

A Professional Touch

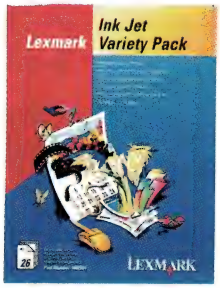
Our extensive stationery range caters to all your printing and special paper needs. From full-gloss photo paper for printing family photos to iron-on transfers for T-shirt printing and double sided inkjet paper with matt finish for creating school assignments and business reports, we offer classy solutions to achieve a professional finish. Visit any of our stores and see our full range!

Continuous Computer Paper
1000 sheets, 11"x 9.5".
F 3650
$19.90

A4 Copy/Typewriter paper
500 x A4 sheets. 80g
F 0948
$7.95

Celcast Inkjet Paper IJ84
Premium coated colour inkjet paper. 100 single sided sheets.
F 1732
CELCAST
$20.95

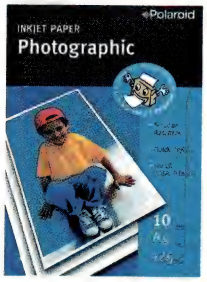
Celcast IJ90 Ultra Gloss Paper
Full-gloss ink jet paper, dries instantly and is water resistant. Has a photo appearance. 205gsm. Pack of 10.
XM7002
CELCAST
$19.95



Lexmark Inkjet Variety Pack
Includes 20 inkjet sheets, 4 gloss films and 2 inkjet transparencies.
F 1752
LEXMARK
$17.50

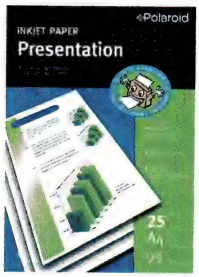
Celcast IJ77 Iron-on Transfer
Designed especially for dark or black T-shirts. Can be used for craft purposes, for example tiles, wood and metal. Pack of 3.
F 1739
CELCAST
$18.50

Lexmark Paper Iron-on
10 A4 sheets. Print out your design and iron it onto a white T-shirt.
F 1753
LEXMARK
$29.85

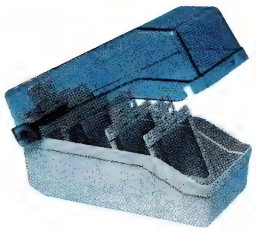


Photographic Inkjet Paper
A4, smudge resistant, quick drying paper for all inkjet printers. 125gsm. Pack of 10.
XM5222
$15.95

Iron On Transfer
Pack of 3, A4 size smudge resistant and quick drying, suitable for black or white T-shirts.
XM5220
$18.95

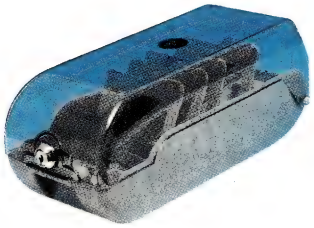


Presentation Paper
25 sheets of A4, smudge resistant, quick drying paper for inkjet printers. 95gsm.
XM5221
$8.95



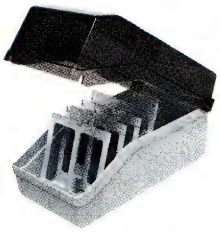
Disk Box Eclipse 3.5
Holds 40 disks.
X 3542 **$6.95**

Holds 90 disks.
X 3541 **$12.95**



Storage Hold 3.5 disks 50pcs
Secure and durable protection for up to 50 computer disks.
X 1475 **$10.95**

Disk Storage 3.5 Holds 200
This stackable, drawer-style unit can hold up to 200 disks.
X 3174 **$19.95**



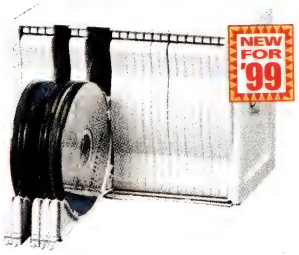
CD Storage Case Eclipse (25)
Protect your CDs in this rugged case. Holds up to 25 CDs.
X 7622 **$9.95**

CD-ROM Carrier Holds 20
Streamlined convenience for safe storage of up to 20 CDs.
X 5681 **$19.95**

Holds 40 disks.
X 2544 **$39.95**

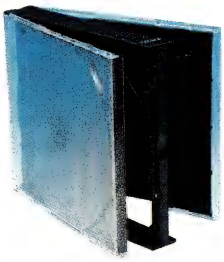
Compact Desktop CD Storage
Organise, store and display up to 20 CD jewel cases. A unique desktop space saver.
XH6015 **$9.95**

CD Storage Wave Tower Holds 20
This unique design allows you to organise and store up to 20 CDs. Removable base for desktop or wall mount installation.
XH6013 **$14.95**



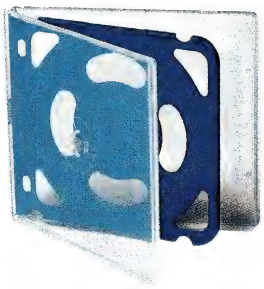
CD Flip File Organiser
Sliding content chart provides quick and easy CD reference and organisation. Allows easy storage of up to 50 CDs.
XH6021 **$39.95**

CD Storage Tower-Swivel Base
360° carousel-style rotating storage comprised of four banks of 26 single-CD slots and 2 double-CD slots. Stores up to 120 CDs.
XH6014 **$49.95**



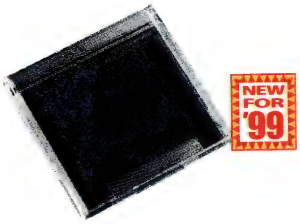
CD-ROM Jewel Case 3 pack
Holds 3 CDs.
X 7561 **$3.95**

Jewel Case for single CD RT2001
X 7549 **$1.95**



CD-ROM Jewel Box
Holds 4 CDs.
X 7426 **$2.95**

Media Storage Blister Packs
Holds 5 floppy disks or 2 Magneto-Optical disks.
XH6016 **$2.95**



Single ZIP Cartridge Jewel Case
XH6017
$1.95

ZIP and 3.5 Storage Case
Holds 3 Zip cartridges or 5 floppy disks.
XH6018 **$3.95**

ZIP Disk Storage Case
Transparent case for easy disk identification. Holds ZIP disks and Magneto-optical disks.
XH6019 **$5.95**

Desktop ZIP and MO Holder
Organises, stores and displays up to 20 Zip or MO Disks with jewel cases.
XH6020 **$5.95**

Diskettes

Dick Smith Electronics has a huge range of diskettes available. Many varieties and all high quality.

RED SPOT Disks 3.5"

DSHD 10 pack. Value priced diskettes.
X 3093

$5.95

Gestetner 3.5" DSHD

10 pack disks for day to day applications.
X 3096

Gestetner

$7.95

Verbatim 3.5" DSHD

10 pack disks when data security is important.
X 2827

11th disk free

Verbatim

$11.95

74min Recordable CD

Features scratch-resistant protective coating, fully printable surface & across the board writer compatibility.
X 4336

$3.95

Verbatim

RICOH Recordable CD 74 mins

Capable of storing up to 650Mb of data.
XH4000

RICOH

$4.95

RICOH Recordable CD 5 Pack	XH4015	**$18.95**
RICOH Recordable CD 10 Pack	XH4043	**$34.95**

RICOH Rewriteable CDRW

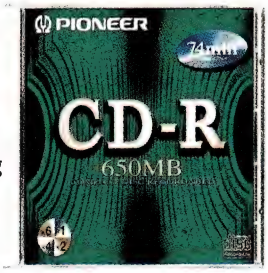
With the CD-RW you can directly overwrite data as many times as you want – 1, 2, 4x compatible (packaging may vary). Requires a CDRW drive.
XM4111

RICOH

$34.95 ea

PIONEER Recordable CDR single

High compatibility with all types of recorders including the latest models. Higher reflectivity for improved reliability.
XH4033



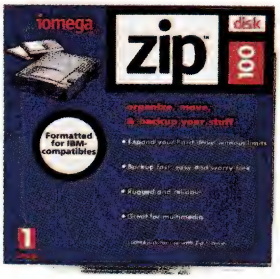
Pioneer

$3.95

10 pack XH4034 **$34.95**

Zip Disk 100MB

Stores 100Mb of data. Suits Zip drive and Zip drive plus.
X 6662



$29.95

IMATION Disks to suit LS-120

These disks appear and function the same as standard disks but feature 120Mb capacity. Compatible with SuperDisk drive only (XH0072). XH0092

$29.95

Extended Warranty

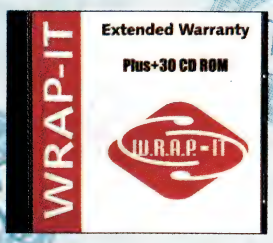
WRAP-IT Plus 20 Warranty

Extended warranty for an additional 20 months (on site). This warranty covers HP Pavilion, Compaq Presario and IBM Aptiva desktops or mini towers. Not applicable to notebooks. Available at time of purchase with new computer.
XC9103

$149

WRAP-IT Plus 30 Warranty

Extended warranty for an additional 30 months (on site). This warranty covers HP Pavilion, Compaq Presario and IBM Aptiva desktops or mini towers. Not applicable to notebooks. Available at time of purchase with new computer.
XC9104



$199

Compaq Extended Warranty

Purchase this at the same time as your new Compaq computer and extend an additional 2 years on site warranty to the existing 1 year of on site warranty.
This warranty can also be purchased for Compaq notebooks. The service for notebooks is return to base.
XC9105

$249

Keyboard Win 95 104K

The first keyboard with a complete screw free design. This PC/AT/PS2 compatible keyboard stands upright to save desk space.

X 8243

$39.95

Keyboard Ergonomic Win 95 104K

This 2D front-tilt ergonomic PC Windows keyboard is designed with a fixed palm rest to let users type in a more natural way.

X 8915 *While stocks last.*

$54.95

Tag Along Keyboard

Features an extended 104 key layout, three Win 95 keys, tactile response keys and a PS/2 connector. Comes with a 2 year warranty and a colour-coordinated PS/2 mouse. *While stocks last.*

Beige XH3400
Black XH3401

NEW FOR '99

$59.95

Keyboard Classic 104

Durable and compact, features extra large L-shaped enter key. All keys factory tested to withstand 20 million keystrokes.

X 7062

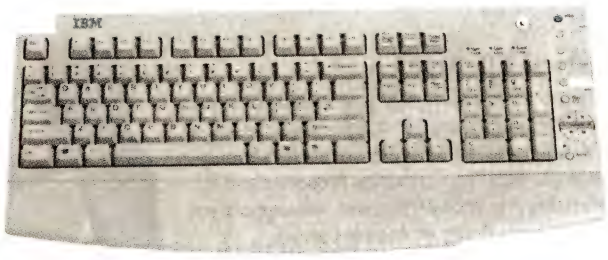
$79

Internet Keyboard

Fully functioning keyboard with Internet facility including 17 button browser control and 12 customisable function keys. 3 year warranty.

XH3406

Logitech **$79.95**



Rapid Access Keypad

104-key rapid access keyboard features 14 buttons function like hot keys providing instant access to programs or files. Preset buttons include: volume up & down; mute; play, stop or pause CD.

XH3409

IBM **$99**

NEW FOR '99

Natural Keyboard Elite

Ergonomic, 105 key design reduces repetitive stress injury, while Windows 95 hot keys mean speedy access. Connects to USB port.

XH3403

Microsoft **$79**

Keyboard Drawer

Keep your keyboard neatly tucked away when not in use.

X 8646

DSX **$44.95**

Joysticks are a fantastic idea for all those gamers out there who need faster action, movability and firepower! Move faster and fire quicker with joysticks offering comfortable grip.

Dick Smith Electronics has a wide range of joysticks for you to choose from. Make playing action games a more exciting and comfortable task. Great for car racing, sport and action games!

SAITEK
Megapad VII X6-30

The X6-30 is a comfortable, no frills game pad that can withstand heavy, prolonged game play. Features 4 fire buttons, individual turbo/auto fire select and has 8 way thumb pad.

X 3102

$19.95

SAITEK
Megagrip III MX230/X732

Classic Joystick styling. Features 2 fire buttons and individual turbo fire select and has trimmers for X and Y axis.

X 3594

$24.95

Megapad XII Joypad

Award winning game pad that offers exceptional comfort and functionality. Micro-switched thumb pad provides fast and positive response. Features individual turbo/auto fire select on each of the 6 fire buttons.

X 6927

$29.95

Joypad X6-34

Perfect for fast response action games, this quality game pad offers 4 axis and 4 button control.

XH3625

$29.95

Joystick GC-1000A

Giving you performance ability at an affordable price, and yet without any quality compromise, the GC-1000A will appeal to both the casual and serious game player. Solid base, accurate firepower and a comfortable grip provide you with the support you need to master the most complex games.

X 3497

$39.95

DSX

Sidewinder Precision Pro

Features digital optical technology and improved ergonomics. Has an eight-way hat switch, throttle wheel, handle rotation and axis movement. You can program keystrokes, keystrings and chords to single joystick buttons.

XH3602

$149

Microsoft®

Wingman Formula Steering Wheel

This steel shaft wheel features formula 1-style paddle shifters plus 4 buttons, fully programmable shifters, buttons and pedals and includes "dead pedal" foot rest and "Fit-all" clamping system. Comes with racing game software.

XH3619

$199

Logitech

Wingman Force Joystick

Exclusive I-Force force feedback cable-drive system for greater realism, 8-way hat switch, 9 programmable buttons, USB and serial interfaces. Comes with games software.

XH3618

$249

Logitech

DSX 3 Button Mouse

Budget priced 3 button mouse connects to serial port. Comes with mouse driver to add scrolling & zoom function support.

XH1836 Available June 99.

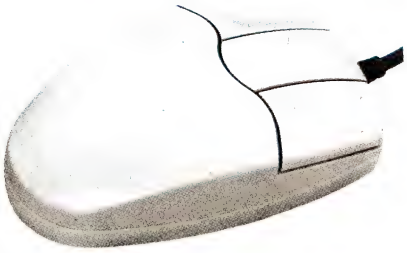
$27.95

DSX PS/2 Mouse

Great replacement for your old mouse. Connects to PS/2 port. Suitable for IBM, Compaq etc.

XH1837 Available June 99.

$29.95

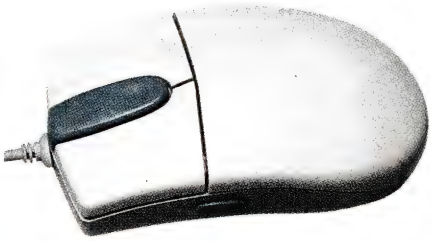


DSX USB Mouse

3 button mouse connects to USB port and requires Windows 98. Take advantage of Windows 98 mouse driver for enhanced auto-scrolling function support.

XH1838 Available June 99.

$34.95



Ergonomic Mouse

The scroll button allows up and down scrolling, moving screens vertically and horizontally, program switching and automatic button find. Includes serial and PS/2 connectors.

XH1815

$39.95

Logitech First Mouse 3 Button

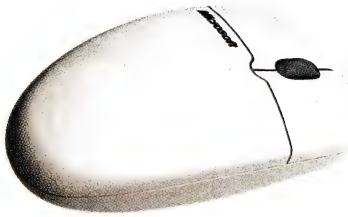
This ambidextrous shape, 3 button mouse, plugs into the PS/2 or serial port and is compatible with Win 98, Win 95 and NT4.0.

2 YEAR WARRANTY.

XH1834

Logitech

$44.95



Wheel Mouse

Features innovative wheel in the face of mouse. Roll the wheel forward or backward instead of clicking on a scroll bar or arrow. It's a fast and easy way to move through documents and works in Windows 95 and Windows NT based applications.

XH1820

Microsoft

$49.95

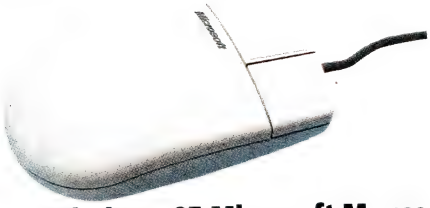
First Mouse Plus

This ambidextrous 2-button and wheel mouse plugs into either serial or PS/2 ports, supports universal scroll and autoscroll in all Windows 95 applications.

1 YEAR WARRANTY

XH1801

$69



For Windows 95 Microsoft Mouse

Comfortable & accurate, Microsoft Mouse also comes with IntelliPoint software that makes your Windows 95 tasks more efficient. You can assign repetitive tasks to mouse functions giving you more versatility. Plus, there are 125 different cursor shapes to choose from!

X 1453

$85

Acecat III Tablet 5" x 5"

Ideal for the home office, this ultra light tablet can be held in the plam of your hand, on your lap or on a crowded desktop. As well as being great for painting and design programs, the Acecat is ideal for web page layout and other Internet applications.

X 8914

$199

Acecad Graphics Tablet 30 x 30cm (12" x 12")

Power, precision and performance – this high-quality graphics tablet ensures you get the job done quickly and easily! Supports resolutions up to 2540 LPI and is compatible with all major industry standards and will support virtually all applications available today. Complete with drivers, is easy-to-install and operates with a programmable lightweight pen supplied.

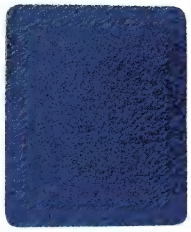
X 3130

$299

View X 7433
Eagle X 7438
Cheetah X 7434
Sunset X 7439
Space X 7435
Tiger X 7446

$7.95 ea

DSE Precise Mouse Pad – Blue



Non-slip backing hugs the workspace. Specially designed to improve precision of your mouse. Thin construction, more elegant than traditional mouse mats.
XH5000

$9.95

3M Precise Mouse Pad – Grey

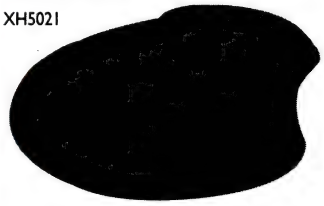
With micro-groove surface technology to eliminate slippage and an ultra thin, lay-flat design.
XH5004

NEW FOR '99

$14.95

Mouse Pad Wrist Rest

XH5021



$14.95

3M Precise Mouse Pad – Water

With micro-groove surface technology to eliminate slippage and an ultra thin, lay-flat design.
XH5006

NEW FOR '99

$14.95

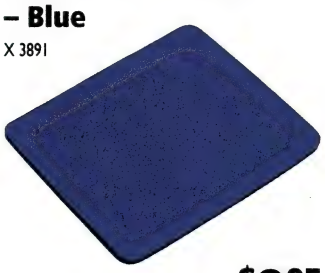
Mouse House

Keep your mouse safe and protected when not in use, with this mouse house.
X 3799

$5.95

Anti-static Mouse Pad – Blue

X 3891



$9.95

PC Mouse Station

Keep organised with this PC mouse station. With an ergonomic-designed wrist rest, it is a must for anyone using a mouse, to prevent wrist injury. Storage for up to nine diskettes, sticky notes and pens. Includes mouse pad and anti-slip, anti-scratch feet.
X 1093

$22.95

Mouse Pad with Calculator

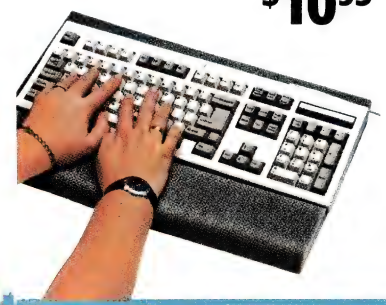
You'll never have to search for your calculator again. This nifty and practical idea will make dealing with numbers more efficient. The mouse pad has a calculator installed so it is always at your fingertips.
X 2247

$22.95

Keyboard Rest

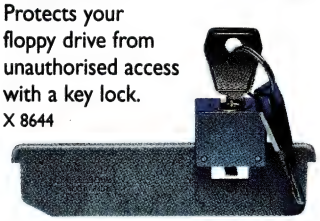
X 3900

$10.95



Floppy Lock 3.5 – Beige

Protects your floppy drive from unauthorised access with a key lock.
X 8644



$16.95

Computer Cable Tidy Kit

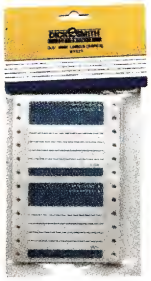
Stop cable chaos. This kit keeps your computer cables neat and tidy.
X 4699

$24.95

Disk Labels 3.5 (50)

Pack of 50 blank labels for 3.5" diskettes.
X 1171

$7.95



Economical Monitor Arm

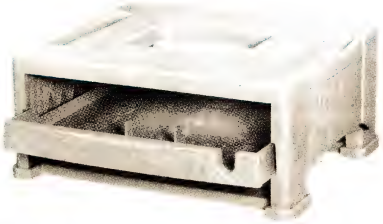
Enjoy more desk space with your monitor out of the way! The arm's sturdy design allows for 360° rotation.

X 1065 **$44.95**

Monitor Mover

Leaves more room for your keyboard! This high-quality monitor holder can hold up to 25kg and rotates 360°.

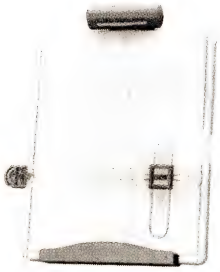
X 1201 **$79.95**



Monitor Stand with Organiser

This modern, elegant design, constructed of high impact plastic material has a slide drawer to hold desktop utensils including mouse. Also includes a keyboard holder for more desk space. Supports 14", 15" or 17" monitors.

XH5007 NEW FOR '99 **$39.95**



Copy Holder with Ruler

This handy sliding ruler and cross line guide, holds your documents with ease, assisting maximum typing efficiency. The five adjustable angles, offer increased comfort and better visual angles.

XH5008 NEW FOR '99 **$19.95**

CD Labelling System

Make custom labels for your CD-R, CD-RW, DVD, and VCD CD's. Features an easy to use applicator for smooth and even label adhesion.

XH6105 NEW FOR '99 **$49.95**

CD Stomper Pro New Version

CD Stomper Pro includes; Design Studio & SureThing software, 50 CD labels and 100 Zip labels. Can be printed with inkjet or laser printer. SureThing software included.

XH6102 **$79**

100 Label Pack For CD Stomper Pro XH6103 **$39**

14" (36cm) Screen Filter

Put an end to annoying reflections on your monitor and increase screen contrast with this easy-to-install screen filter. Simply attach to your monitor with velcro pads.

X 3888 **$27.95**

Screen Filter with Ground Wire

Helps to increase screen contrast and clarity, reducing eyestrain and glare. Also features an earth-wire to reduce screen static.

X 3405 **$54.95**

3M Antiglare Filter AF100L Std

This filter virtually eliminates screen glare and improves screen contrast to reduce eyestrain and discomfort. Suits 14" & 15" monitors.

X 5238 **$69.95**

Cleaning Kit 3.5 Disk Drive

Keep your disk drives clean and in top performance mode, by cleaning regularly with this kit.

X 3520 **$10.95**

3M Keyboard Cleaner #764

Maintain the appearance of your keyboard with this cleaning kit. Contains fluid and applicator.

X 7371 **$16.95**

CD-ROM Laser Lens Cleaner

Prolongs the life of your CD-ROM drive. Regular cleaning keeps drives running efficiently and dirt-free.

XH7600 **$12.95**

Ethernet Network Cable 2 metre

Pre-cut 'thin' cable complete with BNC plugs on each end.
X 6904

$21.95

5 metre	X 6905	$32.95
10 metre	X 6906	$39.95

Network 50 Ohm Terminator

Essential for all vacant T-connector sockets.
X 6914

$4.95

Network 50 Ohm Terminator with chain

Essential for all vacant T-connector sockets with handy chain.
X 6915

$5.95

I Connector for Network

There's no need to go out and buy a new longer cable, just use this I-connector to join two smaller cables.
X 6916

$4.95

T Connector for Network

Connect cables and network card.
X 6917

$6.95

Network Cable 10BaseT 3m Cat5

Pre-cut category 5 unshielded twisted pair (UTP) cables with RJ-45 connections.
X 2831

$14.95

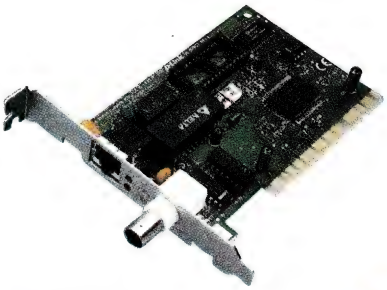
1m	X 2848	$10.95
5m	X 2832	$24.95
10m	X 2843	$32.95

Dlink ISA BusPNP Ethernet Adaptor

NEW FOR '99

Combination card with RJ-45 and BNC connectors, full Plug and Play, and auto-detection of cable type.
XH7221

$39



Dlink PCI Bus Ethernet Adaptor

NEW FOR '99

Combination card with RJ-45 and BNC connectors, auto-detection of cable type.
XH7222

$59

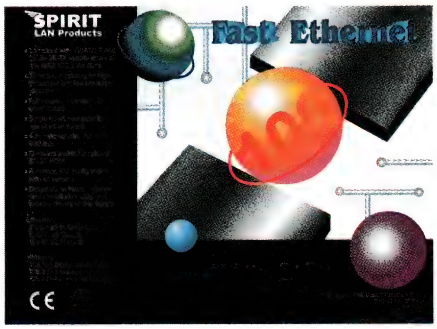
Dlink 5 Port 10Base-T Ethernet Hub

NEW FOR '99

This 5 port hub is ideal for setting up small computer networks around the home or office.
XH7218

$119

Not in all stores – may be ordered



Spirit 10/100 PCI Network Card

NEW FOR '99

Automatically selects 10 or 100Mbps. Has auto PCI configuration without jumper. Complies with Windows Plug & Play
XH7226

$49

Dlink PC Card Ethernet Card for Notebooks

NEW FOR '99

Combination PCMCIA network card with RJ-45 & BNC connectors. 30% faster than standard PCMCIA card. Windows '95 & NT compatible.
XH7223
Not in all stores – may be ordered

$149

MEMORY UPGRADES

Is your computer slowing you down? An easy way to enhance your computer's performance is to add more memory. Simply installing a memory upgrade will significantly speed up Windows applications and multi-tasking.
We have a range of upgrades to suit IBM and compatible PCs.
Please call into your nearest store for up-to-date pricing.

Adaptors and Testers

When an existing cable does not match the connection on the back of the computer you don't have to buy a new cable. Simply use an adaptor. Plug it into the end of the cable to effectively change the "gender" of the cable from male to female or vice versa.

Testing serial ports, modems and cables is easy with our testers. Simply plug the tester in between the cable and serial port device (or in between the port and cable) and flashing lights indicate signals being transmitted or bounced back. Alternatively, test a serial port simply by plugging a loopback connector into a port in conjunction with diagnostic software.

Slimline 9-Pin M to 25-Pin M

This serial gender-changer allows a 9-pin female 'D' style socket to connect with a 25-pin female 'D' style socket. It is not a null-modem.
X 8211 **$9.95**

Slimline Serial Port Adaptor 9M – 25F

Great for connecting 9-pin female 'D' style sockets to 25-pin male 'D' style plugs. This serial adaptor is not a null-modem.
X 8213 **$9.95**

9-pin M to 25-pim F X 8228 **$9.95**

Parallel Data Transfer Adaptor

When used with a standard 25-way male to female cable, this allows the parallel ports of two computers to be connected together for use with programs such as Laplink and Interlink.
X 8219 **$9.95**

DB 25M – DB 25F X 8223 **$9.95**

Serial Loopback (DB 25F)

Compatible with almost all diagnostic software, this plug is an ideal aid for serial port troubleshooting.
X 8224 **$9.95**

Adaptor VGA PS/2 9M15F

This adaptor allows standard VGA 15-pin, high-density plugs to connect with 9-pin sockets. It will not adapt an EGA monitor to a VGA monitor.
X 8229 **$9.95**

AT-PS/2 Keyboard Adaptor 5F-6M

PC/AT keyboards fitted with the large 5-pin DIN plug can now be connected to computers having the newer PS/2 6-pin mini DIN socket with this adaptor.
X 8207 **$9.95**

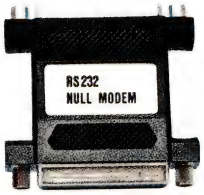
6-pin F to 5-pin M Allows a PS/2 keyboard to connect to a PC with the larger 5-pin socket.
X 8222 **$9.95**

Adaptor RS-232 9F-25M

Quality adaptors for joining 9-pin male cables to 25-pin female cables.
X 2660 **$14.95**

9-pin M to 25-pin F X 2661 **$14.95**

Null-Modem RS-232 25F-25F



Features a DB25 female connector at each end. Wired for full 'handshaking' and allows connection of serial printers (requiring null-modems) or the connection of two computers back-to-back.
X 2664 **$14.95**

Adaptor RJ11 to DB 25 Male

A quick and easy way to connect two computers or devices (serial connections) using a modular telephone extension lead. Up to 6 connections can be made using a 6-wire phone extension lead.
X 2673 **$9.95**

Slim Gender Changer 9FM-9FM

Slim solution to joining two male 9-pin connectors.
X 2675 **$9.95**

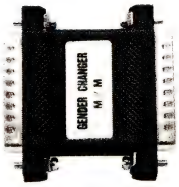
9M-9M X 2676 **$9.95**

Slim Gender Changer 25FM-25FM

Slim solution to joining two 25-pin male connectors.
X 2677 **$9.95**

25M-25M X 2678 **$9.95**

Gender Changer Male DB 25pin



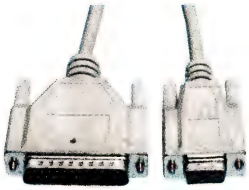
Joins two 25-pin female connectors.
X 3565 **$12.95**

Female DB 25pin X 3566 **$12.95**

SCSI-I Terminator Centronics

Add an additional SCSI terminator to your SCSI chain and you will not have to adjust termination jumpers or switches. 50M single
X 1595 **$21.95**

Data Transfer Serial Cables



9-pin female – 25-pin male

For modem connection to a 9-pin serial port. Fitted with DB9 female connector one end and DB25 male connector at the other.

2 metre version X 8007 **$27.95**

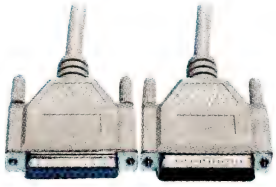
5 metre version X 2697 **$39.95**

25-pin male – 25-pin male

Fitted with 25-pin male 'D' connectors. All lines connected straight through.

2 metre version X 3574 **$32.95**

5 metre version X 2696 **$39.95**

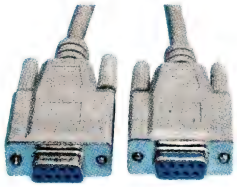


25-pin male – 25-pin female

Fitted with 25-pin female and 25-pin male 'D' connectors on either end. All lines connected straight through.

2 metre version X 3564 **$32.95**

5 metre version X 2695 **$39.95**



9-pin female – 9-pin female

Fitted with 9-pin female 'D' connectors on either end. All lines connected straight through.

2 metre version X 8406 **$18.95**

Internal Cables

3.5" Floppy Disk Drive Power Adaptor

Allows the connection of standard 3.5" disk drives to a 5.25" power supply connector.
X 2605

$10.95

5.25" Floppy Disk Drive Power Splitter

Allows you to connect two disk drives to one power connector. Splits a 4-line Molex male into two female connectors.
X 2604

$10.95

Anti-static Wrist Strap

For installing expansion cards or changing ICs. Helps prevent stray static charges which can destroy ICs in an instant. With adjustable fastening, coiled ground lead and high value series resistor.
X 2042

$17.95

Floppy IDC Universal Data Cable

A floppy drive data cable fitted with both edge and DIL socket connectors. Facilitates easy fitting on both 5.25" and 3.5" floppy disk drives.
X 2606

$21.95

Laplink

Cable for Laplink

Transfer data between two computers. It can be used with Interlink and comes complete with both DB 9 and DB 25 pin connectors at each end to give maximum flexibility.
X 2662

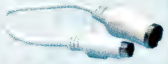
$39.95

2m parallel cable for Laplink X 8259 **$16.95**

5m parallel cable for Laplink X 8261 **$19.95**

Y Adaptor for Joystick

X 2041 **$10.95**



Adaptor PS/2 kb Mini Din 6M-5F

Enables you to connect a regular keyboard to a PC with a PS/2 port.
X 2800 **$14.95**

6F-5M X 2801 **$14.95**

Joystick Extension Cable 15M-F

XH3201 **$14.95**

Printer Cables

25-pin Male-Centronics

For IBM compatibles with DB 25-pin male connector and 36-pin Centronics plug. Also suitable for Atari STe.

2 metre version X 8614 **$25.95**

5 metre version X 8619 **$39.95**

Right-Angle IBM Style Printer Cable

Centronics cable for use where space is limited. Also helps avoid the cable getting caught up in the paper path.

X 8615 **$27.95**

Centronics Cable

Fitted with 36-pin (male) Centronics connectors at each end. As used on other style (not IBM compatible) computers and switch boxes.

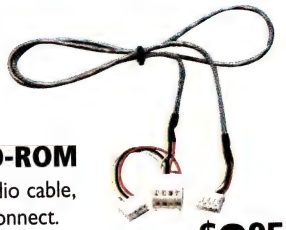
2 metre version X 9005 **$32.95**

Centronics Extension Cable

A 36-pin male to female Centronics extension cable.

2 metre version X 8617 **$21.95**

Extension Cables



CD-ROM
Audio cable, 3 connect.
XH1810
$8.95

IDE Cable for HDD
X 5472
$10.95

Keyboard Extension Cable
Handy 2 metre coiled extension cable with 5-pin DIN connectors that allows you to move your keyboard away from the CPU.
X 2600
$16.95

IEEE 1284 Compliant Cables
Some printer manufacturers (such as Hewlett Packard) specify an IEEE 1284 compliant printer cable to be used with new printers. The main difference with these cables is that they have better shielding properties, with 85% optical braid over foil shielding and a 360° connection between the braid and the shell of the plug.
Parallel printer cable
XH3205
$32.95

Parallel extension cable
XH3207
$32.95

VGA Monitor Extension
With 15-pin, high density connectors at each end. Suits VGA monitors.
2 metres
X 2603
$16.95

Monitor Cable 15-pin M/M
High density male connectors each end. Connects 15-pin VGA monitor to 15-pin VGA card.
2 metres
X 8405
$19.95

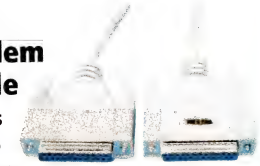
9-pin Male 15-pin Monitor Cable
2 metre long cable with 9-pin, sub density male connector on one end and a 15-pin, high density male connector on the other. Connects 9-pin VGA monitor to 15-pin VGA card.
X 2611
$21.95

Monitor Extension Cable
Cable fitted with 9-pin 'D' connectors that allow you to place the monitor away from the CPU.
2 metre version
X 2602
$16.95

5m version
X 2607
$21.95

PS/2 Extension Cable
Keyboard extension cable suits IBM and compatibles, 6-pin male mini DIN to 6-pin female mini DIN.
2 metres
X 2601
$16.95

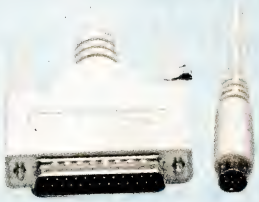
Serial Mouse Extension Cable
This cable allows you to move your mouse further from and around your work station. Suits IBM compatible PCs.
2 metres
X 2610
$16.95



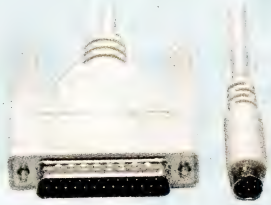
Null Modem Cable
Allows you to connects two PCs in order to send and receive data between them. Great for null-modem ready games, making it possible to play head-to-head.
2 metres
X 2609
$21.95

AppleMac Cables

Printer Cable
Apple IIGS, Mac Plus, SE, II/IIx/IIcx to ImageWriter II/LQ or LaserWriter II NT/NTX, 8-pin male mini DIN to 8-pin male mini DIN.
X 2692
$21.95



Printer/Modem Cable
Apple II/IIe + IIe to ImageWriter II or IIGS, Mac Plus, SE, II/IIx/IIcx to modem cable. DB25 male to 8-pin male mini DIN. All lines connected straight through.
X 2691
$21.95



Adaptor Cable
Apple IIGS or Mac Plus, SE, II/IIx/IIcx adaptor cable. 300mm long. DB9 female to 8-pin male mini DIN.
X 2693
$21.95

SCSI Cables

A. SCSI Cable Centronics
50M/M 90cm.
X 1593
$32.95

B. SCSI Cable Centronics
50M/M 180cm.
X 1594
$37.95

New to the Internet?

So you're new to the net!
Don't worry, everyone was once – and not that long ago either.

You are most probably in your late 20's or older, had blackboards rather than computers at school and don't have a 15-year-old on hand to teach you the ropes.

Don't stress if you're still coming to grips with operating the VCR, the Internet is easier!

Software

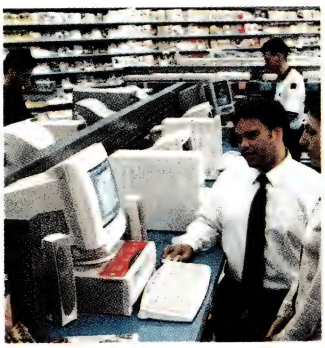
Browser. This is what you need to browse the Internet. The main versions are Netscape and Internet Explorer. Operating systems such as Windows 98 come pre-packaged with Internet Explorer Version 4.0.

Email. To send electronic mail you need email software (eg: Outlook, Outlook Express, Netscape Communicator). Such software often comes with the browser. To use your email software you'll need to get some information from your Internet Service Provider (e.g. BigPond, OzEmail).

AntiVirus. You should be running virus protection software such as Norton's Antivirus to prevent accidental download of viruses.

An ISP (Internet Service Provider)

A huge range of ISPs can provide you with Internet access. They sell you the service of using their lines and modems to connect to the Internet and send email. Once you choose an ISP, you then select one of their plans, such as casual user (pay per hour), 20 hours a month or unlimited usage. Your ISP provides you with an email address, which is usually the user name you registered in front of the Internet Service Provider (ISP) domain name. For example, if Joe Jones choses the user name "jojo" and joins "BestISP", his email address would be jojo@bestisp.com.au. Most Internet Service Providers (ISPs) require a credit card (see page 28 for pre-paid Microplex cards). Speak to your Internet Service Provider (ISP) for help setting up your email account.



What you Need – Hardware

A computer. Almost any computer will do: check with your Internet Service Provider (ISP) if you are unsure. At Dick Smith Electronics, we have the best range, competitive pricing and informed staff to assist you with your purchase.

A modem. This is roughly comparable to your telephone. It plugs into the same line. It can be an internal modem (inside the computer – you may need help installing it) or an external modem (outside the computer). The cost of external modems is slightly higher, but it may be easier for a novice to set up: simply plug one end of the modem's telephone-like plug into the "line" socket on your computer, the other end into your phone line socket. Then put the power plug into a power point and turn the modem on.

Speed. The fastest modem on the market is the 56K, followed by the 33.6K. The only way to get a connection faster than 56K is to have an optical fibre cable connection.

Cable modems. The fastest connection of all. Great for gamers. Try cable modem at our Sydney stores in York Street or Parramatta, or in Melbourne at our Brighton and Springvale stores. Cable modems cost $495 and use the same cable that brings you FOXTEL. Access is only available through Telstra Big Pond and costs $65 per month (at time of publication). To see if it is available to your home, **phone 1800 060 391**.

Getting on the Net

Your ISP will give you a phone number for your computer to dial their computer. To actually connect, it's simple:

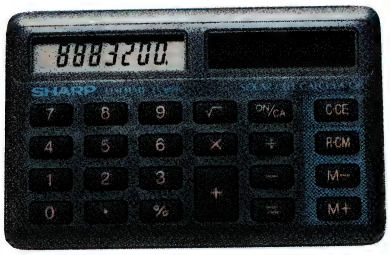
A) Turn on your computer. Double click on your Internet icon (check with ISP if unsure). Enter your user name and password. Click on 'connect'.

B) Your modem will make the "coffee grinder" sounding handshake as it talks to the modem at your ISP.

C) 30 seconds later, voila, you're connected.

D) Now you can browse. Try a site such as www.dse.com.au – Simply type www.dse.com.au in the "location" or "address" field in your browser and press the 'enter' button.

To search for all this wonderful information you've heard about, try using a search engine. Enter www.yahoo.com.au, www.altavista.com or www.goto.com. Type in your search words, and you're off.



Mini Solar Calculator EL896G

This credit card sized solar powered calculator is perfect to carry wherever you go.

V 3807

SHARP **$9.95**

Basic Calculator EL231L

Has a double sized 'plus' key to eliminate chance of error, auto power off and 3-key memory. Functions include square root and percent. Requires 2 x 'AA' batteries.

V 3850

SHARP **$9.95**

Basic Solar Calculator EL376

This solar powered calculator features all the basic functions plus extra features such as a 4-key memory and protective wallet. It also comes at a highly affordable price.

V 3895

SHARP **$12.95**

Desk Calculator FD-8

This dual powered solar/battery calculator features general functions, mark up button and a large 8-digit display.

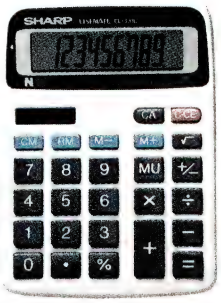
V 3704

CITIZEN **$19.80**

Desktop Calculator EL331

The convenience of a desktop in the standard pocket size model. It has an extra-large 10-digit angled display, solar power with battery backup, a 3-key memory plus % and +/- keys.

V 3794



SHARP **$29.90**

Metric Converter EL344

Solar powered with 44 metric/imperial conversions including pressure, calories, weight and length. Includes 32-digit punctuation, 2-key memory, percentages and square roots.

V 3845

SHARP **$32.95**

Large Desktop Calculator SDC-8355

This desktop calculator features large buttons & angled display, mark up key, backspace key, solar powered with battery backup.

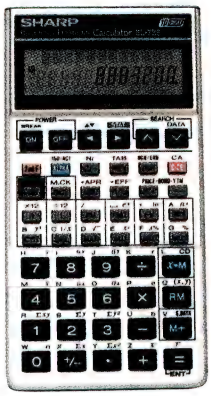
V 3705

CITIZEN **$38.90**

Financial Calculator EL735

Calculate your finances with this reliable calculator. It has a 2-line display, database function, bond price and yield calculation facilities. Other features include days/date calculations, discounted cash flow and many other financial calculations.

V 3520



SHARP **$89.95**

Business Calculator BA35

This calculator includes pre-programmed financial and accounting functions including time value of money & compound interest calculations, is able to recall time value of money values as well as annuity due operations. Can make amortisation balance and payment-to-interest calculations and much more.

V 3535

TEXAS INSTRUMENTS **$54.95**

Desk Printer Calculator EL1607

Has all the professional features needed for heavy-duty business use including 10-digit display, memory, constant/add mode selector and an error indicator. It's mains powered and uses plain paper rolls.

V 3885

SHARP **$139**

Printer Calculator EL1611HL

This compact hand-held calculator boasts many functions and features a large 10-digit display and uses large plain paper rolls.

SHARP **$54.95**

FX82

This calculator handles fractions, has a 10+2 digit digital display and 139 built-in functions including standard deviation, true algebraic logic, engineering applications, auto power off and more. Comes with handy protective case.

V 3820

Educator Approved

CASIO **$32.95**

EL531

Baffled by algebra? The EL531 has direct algebraic logic capability, allowing you to key in algebraic equations exactly as you would on paper. You have a choice of 153 functions. Comes with a durable, protective hard case.

V 3861

Educator Approved

SHARP **$34.95**

EL556

Enjoy the convenience of 287 scientific functions, 32 physical constants and 32 metric conversions! With its direct algebraic logic, the EL556 will also solve equations with ease. Features large, easy-to-read display and durable hard case.

V 3829

SHARP **$44.95**

FX100

The highly regarded Casio FX100 boasts a hefty 252 functions, 10+2 digit digital display, basic conversions, logic operations and 18 levels of parentheses. It handles fractions, features an economical auto power-off function and offers memory retention.

V 3822

Educator Approved

CASIO **$54.95**

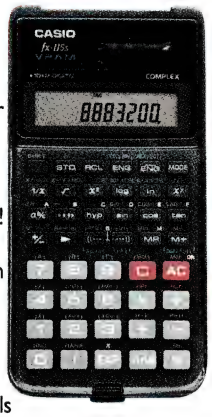
FX570

This slimline design calculator with slide-on case features all the expected specialised formulae & applications. Solving problems is as easy as calling up a function, filling in the values & reading the answer on the 10+2 digit screen. Information can be retained after power-off.

V 3857

CASIO **$54.95**

FX115



Enjoy the problem solving power of 252 invaluable formulae and functions! Solar powered with battery back-up, this superb calculator offers 18 levels of parentheses, power-off memory retention, 10+2 digit display, base conversions, true algebraic logic and standard deviation.

V 3824

CASIO **$59.95**

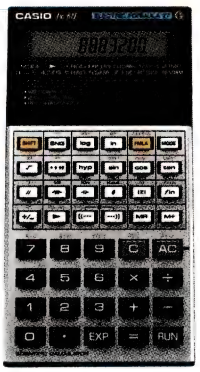
EL5120

Handle the toughest of mathematical problems with the formidable power of this calculator. The solver function lets you find the variables in equations the EL5120 also offers direct algebraic logic, 1200 bytes of free memory, one-line editor, playback function & a 3-line display. Includes protective hard case.

V 3827 *Not available in all stores*

SHARP **$89.95**

FX61



This professional model comes pre-programmed with 27 of the most widely used electronics formulae. It offers resonance frequency, impedance and voltage/current gain functions, as well as 80 general scientific functions. The FX61 is programmable and boasts a 10+2 digit display.

V 3828

CASIO **$89.95**

FX7400G Graphing Calculator

An on-screen icon driven menu makes this calculator easy-to-use. The screen is sized 13 characters by 8 lines. It has list functions and multiple graphs and is approved for school use in WA and VIC.

V 4646 *Not available in all stores*

Educator Approved

CASIO **$129**

FX9850 G Plus Graphing Calculator

Enjoy the many features that this calculator has to offer including on-screen icon driven menu, 21 digit 8 line large colour screen, statistical and compound interest graphing with equation solver. Approved in WA and VIC schools.

V 4647

CASIO **$229**

Graphing Scientific Calculator TI83

Handles real & complex numbers, lists, matrices & strings, pull down menus allow easy-access to functions. Split screen allows you to look at two different screens at the same time. Choose from a 7 graphing styles including shading.

V 3840

Not available in all stores **$179**

Graphing Scientific Calculator TI86

Does functions, polar, parametric and differential equations in 7 different graph styles. Includes calculus features such as integration, derivatives, minimums, maximums, roots & arcs. Features an 8 line x 21-character screen plus 2 levels of display menus and 128k of memory.

V 3841

Not available in all stores **$299**

Spellchecker

Includes spellchecking for up to 80,000 words, missing letter search function and calculator. Fantastic value!
V 7317

digitor

$14.50

Collins Spellmaster SMQ100

Includes over 80,000 words in Queen's English plus a 'confusable' word list that identifies more than 1,700 commonly confused words. Includes challenging word games and QWERTY keyboard.
V 7310

Franklin

$49.95

Spellmaster SMM106

This is the only Australian English spellchecker on the market. Featuring 80,000 words from the Macquarie Australian Dictionary, calculator and databank. A fantastic buy for anyone!
V 7336

NEW FOR '99

BOOKMAN

$49.95

Wordmaster TMQ100

Offers a thesaurus containing 500,000 words, 100,000 word spell-check and a list of 1,700 'confusables' (Queen's English). Plus exciting word games and a 50-word personal user list.
V 7313

Franklin

$59.95

European Translator

Features over 175,000 words & 4000 phrases, a databank that stores up to 100 names & phone numbers, currency & metric converter, calculator, European Airport & airline telephone numbers, Hangman & other word games.
V 7347

NEW FOR '99

$79.95

Franklin

Macquarie Dictionary/Thesaurus

This electronic dictionary features 95,000 words with full definitions from the Australian Macquarie dictionary, a spell checker, grammar options, 500,000 thesaurus options including synonyms and antonyms. Includes 4,480 phrases, word games and identifies 'confusables' and includes slot for additional cartridges.
V 7342

BOOKMAN

$169

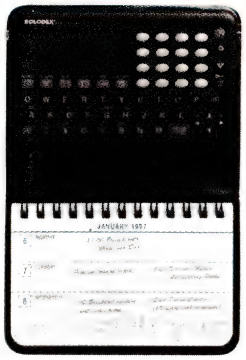
Bookman Cards

Columbia Encyclopedia	V 8100	$89.95
Advanced Thesaurus	V 8101	$39.95
King James Bible	V 8104	$49.95
Parents Emergency Medical Guide	V 8105	$39.95
Advanced Dictionary/Thesaurus	V 8106	$99.95
New International Bible	V 8107	$49.95
Dictionary & Thesaurus	V 8109	$49.95
Crockers Cookbook	V 8110	$49.95
International Wine Guide	V 8112	$69.95
Collegiate Dictionary	V 8113	$199.00
More Views	V 8116	$39.95
Speaking Dictionary/Thesaurus	V 8118	$129.95
Spanish Master	V 8119	$59.95
Bible Questions and Answers	V 8120	$39.95
French/English Dictionary	V 8121	$59.95
Great Documents	V 8122	$59.95
Maths Mystery	V 8124	$39.95
Consumer Drug Reference	V 8126	$59.95
German/English Dictionary	V 8128	$59.95
Dutch/English Dictionary	V 8131	$59.95
Italian/English Dictionary	V 8132	$59.95
Crossword Solver	V 8133	$39.95
Macquarie Dictionary	V 8137	$49.95
Speaking Collegiate Dictionary	V 8138	$199.95

Not all bookman cartridges are on show in all stores, however they can be ordered through the store or by ringing 1300 366 644 our "Direct Link" mail order centre. Your cartridges will be delivered to your door.

DICK SMITH ELECTRONICS direct link

3K Databank



This 3K electronic planner/organiser is wallet-style with a backlit paper planner. It has a schedule, 300-item memory, business and personal phone directories, 10-digit calculator with a numeric keypad, metric/currency converter, 3-line LCD screen, home/world clocks, a daily alarm & hourly chime and password protection. Includes a lithium battery.
V 3431

ROLODEX® ELECTRONICS **$19.95**

11Kb Databank

Features 2 telephone directories, schedule, memo, home/world clock, calculator and conversion. It will store approximately 700 names & phone numbers and also allows storage of e-mail addresses.
V 3434

SHARP **$29.95**

64K Backlit Databank

Features two phone directories, schedule, secret lock function, home/world time, daily and hourly alarm, calculator, metric & currency converter with separate numeric keypad and auto power off function.
V 4697

ROLODEX® ELECTRONICS **$49.95**

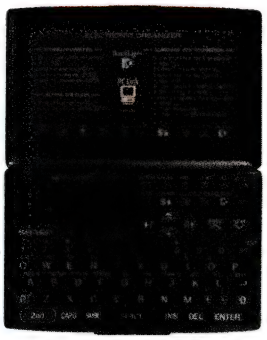
Organiser SF4700 Gold

64K memory and 16 x 4 line backlit display. This organiser features separate numeric keypad, telephone directory, PC linkable with optional cable and software anniversary, home and world time, memo, full month calendar display, schedule appointment keeper and alarm.
V 4797 **$79**

CASIO

Casio Organiser SF4900 Gold 128k	V 4798	**$99**
Casio PC Link	V 4654	**$159**
Link to other Casio Organisers	V 4549	**$29.95**

64K Organiser



This organiser features full screen calendar, schedule function, anniversary reminder, to-do list, 3 telephone directories, memo function, expense manager, calculator and conversion, home/world clock, 64 Kb memory and is PC linkable.
V 4698 **$89.95**

SHARP

Sharp 128Kb Organiser ZQ170	V 9329	**$109**
Sharp ZQ-ZQ Link	V 4595	**$34**
Sharp PC Link CE490	V 9332	**$99**

64K Digital Diary SF5300

You'll be amazed at the features offered on this versatile organiser. Features a roomy 64K memory and includes a four 16 character line display for easy legibility, a directory for all important numbers, expense manager, calculator, memo, appointment keeper with alarm, PC compatibility and more.
V 4530

CASIO **$119.95**

128K Organiser

Lots of memory and huge display make this organiser the perfect gift. It is PC compatible, has 6-8 lines with 24 character display screen, an infra-red data transfer, calculator with separate keypad, daily reminder and alarm, monthly calendar, password access, schedular and to-do list.
V 3430

ROLODEX® ELECTRONICS **$99.95**

Rolodex PC Link	V 3432	**$49.95**

256K Organiser

A great travelling companion with massive screen and memory. It has currency and metric conversions, multi languages, home and world time, expense manager, telephone directory, to-do list, calendar, schedule and separate calculator keyboard.
V 3411

digitor **$149**

Digitor PC Link	V 3410	**$49.95**

128Kb Organiser ZQ470

Has screen and separate numeric keypad in the lid, allowing a much larger keyboard for easy use. Features backlit 5 line display, calendar/schedular, anniversary function, to-do list and much more.
V 9331

$159

SHARP

PALM III

Palm III

Put information at your fingertips with the pocket-sized Palm III organiser. Store thousands of names, addresses, expense items and even mail. Back-up and exchange information with your desktop PC and popular Personal Information Management software at the touch of a button. 'Beam' files and applications to other Palm III users. Palm III organiser is the number one way to stay connected and organised.

V 4780

$699

Palm III Accessories

	Cat No.	Price
US Robotics Pilot Belt Clip	V 4753	$59.00
US Robotics Pilot Leather Case	V 4754	$49.95
US Robotics HotSync Cable	V 4757	$43.95
US Robotics Deluxe Leather Case	V 4758	$129.95
Intellisync Software V3	V 4769	$159.00
3COM Palm Pilot PC Cradle	V 4782	$69.95
3COM Palm Pilot MAC Cradle	V 4783	$69.95
Palm Pilot HandWeb Software	V 4784	$117.00
3COM Palm Pilot Modem	V 4788	$299.00
3COM Palm Pilot Hard Cover	V 4789	$24.95
3COM Palm III Colour Pack	V 4794	$42.95
GSM Mobile Phone Modems		
Available for a range of popular mobile phones	Various	$299.00
Also available:		
Palm IIIX (4Mb Version)	V 4799	$799.00
Palm V	V 4795	$999.00

3Com

ZQ-570

This 256Kb organiser allows zero touch synchronisation with a PC with optional cable and software. It features a schedule function with multiple view options for easy planning, anniversary function, To Do list, telephone directory, user file database, calculator and home/world clock. It utilises flash memory – your information is protected even if the batteries are removed. The screen-in-lid combined with a separate numeric keypad allows for a very spacious keypad.

V 9336

$209

SHARP

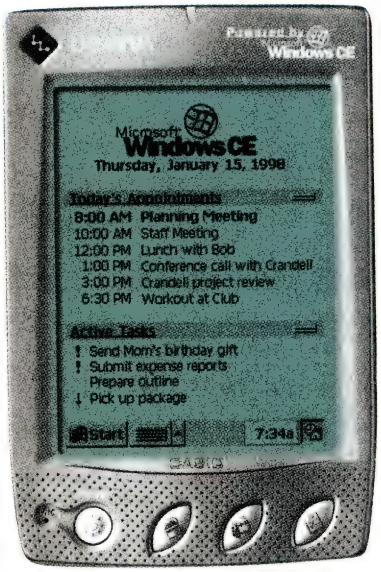
Sharp	ZQ640	512 KB	V 4693	$299
Sharp	ZQ650	1 MB	V 4692	$369

Rex Pro 5

Allows up to 6000 entries (512Kb)and comes with TrueSync Desktop & TrueSync Plus software to allow you to synchronise with other software such as Outlook, Act, Schedule and more. Also features superkey edit system that lets you enter data into the Rex Pro itself. Fits a standard PCMCIA slot to synchronise with a notebook PC and weighs only 39 grams. 9-line, 160x98 pixel display, and includes contacts, memos, to-do list, calendar, alarm clock and more.

V 3444

$399



Put the E-11 in your Hands

Synchronise with Microsoft Outlook on your PC, using appointments, calendar and more. The E-11 has 8MB RAM (upgradeable) and Windows CE V2.0 operating system. Features large LCD screen with pop-up input panel, voice recording and quick launch buttons to give quick access to applications. Software includes Palm Golf (Golf game), Casio menu Launcher (Launcher). Input with either a stylus or an electronic "keyboard".

XC4012 *Not available in all stores.*

$599

CASSIOPEIA CASIO.

The E-100 Breakthrough

Get the latest look with this high resolution TFT colour palm-sized PC. It uses Windows CE operating system and synchronises with Microsoft Outlook on your PC – enabling you to carry all your appointments, contacts and schedules in your hand! 16MB RAM, 16MB ROM and fast 131Mhz processor. Includes cradle, A/C adaptor, application software, rechargeable battery pack, extra battery and soft case.

XC4015 *Available late June.*

$1199

CASSIOPEIA CASIO.

SE300

Compact sized organiser with 1MB memory and a large LCD touch screen with back-light. Flash memory, PC synchronisation, infra-red comm port, clip book software and handwritten ink notes. Includes docking station.

V 3750 *Not available in all stores.*

$399

SHARP

Series 5

Featuring 8MB RAM (capable of storing 2000 pages of A4 text or 40,000 appointments) and a built-in speaker & microphone. Infra-red port for communication with IrDA compatible printers & other Psions. Functions include agenda, database, alarm clock & world info, voice record & playback, word processor, spreadsheet, sketch pad, presentation maker, fax, e-mail & web browser. Comes with touch screen & stylus.

V 9112 *Not available in all stores.*

$1099

PSION

Accessories	Cat No.	Price
Psion 3C/Siena/5C Printer Cable	V 9117	$89.95
Psion PC Card Modem Adaptor	V 9118	$249.00
Psion 5 Stylus 3 Pack	V 9124	$14.95
Psion 5 Power Supply	V 9127	$59.95
Psion 3 Power Supply	V 9128	$59.95
Psion Leather Case	V 9116	$99.95

Soothing Clock Radio

Snooze to the soothing sounds of a morning bird chorus, frogs chirping in the pond, waves crashing on the beach or rain forest ambience with this dual alarm clock radio. Features a cool blue back light, large LCD display showing time, temperature and calendar. Includes AC adaptor. Needs 2 x 'AA' batteries and 4 x 'C' batteries.

A 4326

digitor

$79.50

AM/FM Clock Radio

Battery back up makes this alarm ultra reliable so you'll never be late! Wake to AM/FM radio or buzzer. With snooze/sleep functions.

A 4347

digitor

$24.95

Digital Clock Radio

A reliable Sony 'dream machine' clock radio with red clock display. Features include AM/FM radio, power back-up and a snooze function.

A 4680

SONY

$29.95

Clock Radio with Large Numbers

Rest your eyes with this AM/FM LED clock radio featuring large numbers. It has a 0.9 inch red LED digital display, 9-minute snooze alarm, 59-minute sleep setting, PM and auto indicator and battery back-up. A 4354

digitor

$27.50

White Clock Radio

AM/FM radio alarm. Features battery backup with snooze control and a green LED display.

A 4652

SANYO

$29.95

Dual Alarm Clock Radio

Dual alarm and battery back-up are features of this AM/FM radio with snooze control and green LED display.

A 4651

digitor

$34.95

Stylish Dual-Alarm Radio

In a stylish design, this clock radio provides dual alarms (one each), AM/FM radio, snooze/sleep functions, up and down time setting and buzzer/radio alarm option.

A 4348

SANYO

$39.50

Travel Clock Radio

Perfect for people on the move, this clock radio is housed in a protective case. It features a large LCD display, snooze function, alarm/buzzer option and headphone jack for personal listening. No need to rely on those old motel clock radios.

A 4671

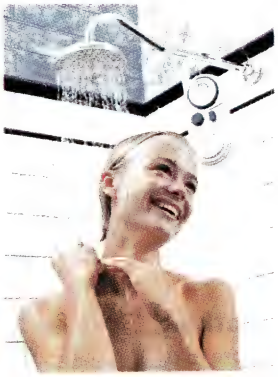
digitor

$42.95

Shower Radio

With AM/FM reception and water resistant casing. Uses 2 x 'AA' batteries.
A 4799

$26.95

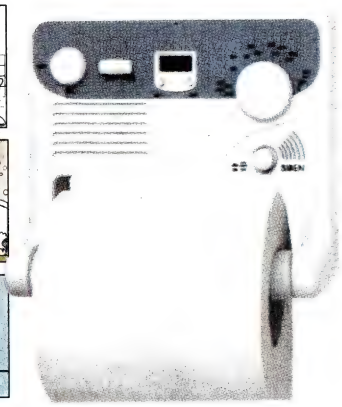


digitor

Restroom Radio

This radio features an LCD clock, an emergency siren for safety, rotary control volume and a soft wire FM antenna. Uses 4 x 'AA' batteries (not included).
A 2200

$26.95



Micro Radio

This pocket-sized radio weighs just 38 grams without batteries. Features DBB (Deep Base Boost), stero/mono switch and includes stereo earphones.
A 0159

SANGEAN

$59.90

Walkman AM/FM Radio

Enjoy your favourite radio sounds anytime, anywhere with this stylish AM/FM radio, including stereo headphones and beltclip.
A 4370

SONY

$45

AM/FM Headphone Radio

Folding light-weight AM/FM head-phone radio with LED power indicator and rubber antenna. Uses 2 x 'AA' batteries (not included).
A 5910

digitor

$21.95

Radio Headband

This headphone-style AM/FM radio has a double headband making it the perfect motivational companion for early morning jogs.
A 0420

SONY

$69

Pocket AM/FM radio

A handy slim pocket-size transistor radio complete with earphones. Takes 2 x 'AAA' batteries.
A 4069

digitor

$12.95

Pocket Radio AM/FM

In sleek vertical style, this bargain priced radio will fit neatly in your pocket! Complete with earphones and carry strap.
A 4080

SANYO

$16.95

Auto-Tune FM Radio

Auto-touch tuning makes this FM radio easy to tune when you're on the move! Complete with earphones for private listening.
A 4322

digitor

$25.50

AM/FM Radio

New designer style portable AM/FM radio. State of the art style and performance.
A 4350

digitor **$15.95**

Super Radio III

This high-performance long-range AM/FM portable radio has outstanding reception and outstanding station selectivity and sensitivity. With auto switching, auto frequency and bass and treble control, plus its two-way speaker system, it produces superb sound.

A 4035

$149

Digital Pocket Radio

Carry this compact radio anywhere! Features PLL digital automatic tuner, 10 station memory, key-lock function and LCD display. Built-in speaker and bud earphones included.

A 4149

SANYO

NEW FOR '99

$59.95

Dual-Powered AM/FM Radio

In a stylish, modern design, this miniature radio operates on both solar power and 'AA' batteries. Comes complete with stereo earphones.

A 4381

digitor

$28.50

Splash Proof Radio

Great for around the pool, this AM/FM DC pocket radio is splash proof and includes earphones and carry strap. Needs 1 x 'AA' battery. Dimensions: 65 x 100 x 27mm.

A 4511

SANYO

$29.95

Sports Radio

This all-weather splash resistant model has a built-in wide-range speaker and runs on 2 x 'AA' batteries (not included).

A 4514

digitor

$25

Freeplay Clockwork Radio

The world's first clockwork radio. This amazing radio needs no batteries. Operates with a wind up technique: 60 turns (approx 20 seconds), gives approx. 40 minutes playtime. Pick up AM, FM and shortwave. Speaker size: 3.5", impedance 8 OHMS, output 4W. Great for emergency situations.

A 0300

$149

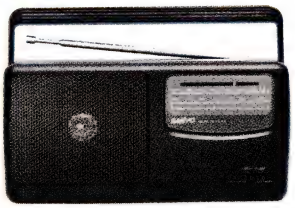
AM/FM Radio

A great low price for a Sanyo radio! It's AC/DC powered and comes with earphone jack and telescopic antenna.

12 MONTHS WARRANTY

A 4139

SANYO



$32.95

Radio AM/FM

With LED tuning indicator and earphone jack, it's a great compact radio!

A 4371

SONY

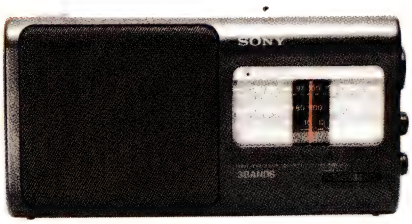
$34.95

AM/FM Shortwave Radio

A high-quality Sony shortwave radio. It offers shortwave fine-tuning with LED indicator and tone control for clarity of shortwave reception.

A 4373

SONY



$65

Personal Radio Cassette Player

Great budget-priced personal cassette player with AM/FM radio. Comes complete with headphones in a funky range of colours.

Black	A 4503	Yellow	A 4506
Blue	A 4504	Red	A 4512
Green	A 4505		

SANYO **$32.95**

Personal Radio/Cassette

This ultra compact stereo radio cassette has AM/FM radio and deep bass boost.

NEW FOR '99

A 4898

digitor **$26.95**

Walkman Radio Cassette

Sleek new design features AM/FM radio, mega bass, Fontopia ear phones and up to 24 hours battery life.

A 4242

SONY **$59**

Personal Radio Cassette Recorder

Built-in speakers and mic make this recorder convenient and simple. It features AM/FM stereo receiver, stereo cassette player, one-touch recording system, built-in dual stereo speakers, built-in mic, FM stereo LED indicator, built-in 3V DC input jack and professional stereo headphones (featuring single-side cord). Needs 2 x 'AA' batteries (not included).

A 4280

digitor **$69.95**

Sony AM/FM Auto Reverse

Personal stereo sound at its best! This Sony Walkman offers AM/FM stereo, auto reverse, anti-rolling mechanism and mega-bass.

A 4233

SONY **$89**

Personal Radio Cassette

This AM/FM radio cassette sportster has a digital tuner with 10 memories, alarm/clock function, four-button tape control, inner earbud earphone, belt clip, auto stop and anti roll.

A 4509

SANYO **$79.95**

Personal Stereo Cassette

This Digitor stereo has a dynamic bass boost system, slimline stereo cassette player, professional stereo headphones, automatic stop function, built-in adjustable stop function, built-in 3V DC jack. Uses 2 x 'AA' batteries (not included).

A 4899

digitor **$19.50**

Goodmans CD Travel Kit

Easily fitted to almost any vehicle, this travel kit is compatible with most portable CD players. Features anti-vibration cradle and flexible mounting arm adaptor and includes CD cassette adaptor and universal power into cigarette lighter.

C 9211

$89.95

NEW FOR '99

Sanyo CD Player

Listen to your favourite CDs on the move with this 10 second anti shock system. Features round shape design, BassXpander sound system, 24 music random memory, a 1-bit D/A converter and AC adaptor.

A 4516

SANYO **$179**

Walkman

Newly designed, this Walkman features 30 preset radio stations, Megabass, carry case and up to 24 hour battery life.

A 0381

SONY **$99**

NEW FOR '99

CD Player

Enjoy smooth listening with the ESP2 CD anti skip system. Features digital megabass, groove sound system, matching groove earphones and up to 16 hours battery life.

A 5499

SONY **$199**

NEW FOR '99

Recording Walkman

Groove with this AM/FM analogue tuned Walkman. Features stereo recording, AM/FM analogue tuner, auto reverse, two mode megabass, speed control and pause button, 22 hour long battery life, anti-rolling stereo microphone, Fontopia earphones. Stand and carry case supplied.

A 3004

SONY **$155**

NEW FOR '99

Discman with AM/FM Radio

Have it all with this new compact design incorporating both CD player and AM/FM digital tuner. With attractive slimline appearance it features 30 preset memories, groove, LCD display, resume mode and up to 14 hours playback.

A 5486

SONY **$279**

Walkman

Listen to your fave sounds with this AM/FM cassette Walkman. Features 30 pre-set stations, auto reverse, mega bass, Dolby B, feather touch controls and up to 24-hour battery life.

A 4243

SONY **$149**

NEW FOR '99

CD Player

Smooth sounding CD player features ESP2 CD anti-shock system, groove music system, jog dial LCD remote and optical link. Can be used in conjunction with a rechargeable battery.

A 5507

SONY **$299**

Standard Stereo Notetaker

Simple one-touch operation makes it ideal for notetaking. Features built-in mic, tape counter, voice-operated recording, variable speed control and playback equaliser. Includes stereo earphones. AC/DC operable. Needs 2 x 'AA' batteries (not included).

A 5447

SONY **$299**

NEW FOR '99

Mini Disc

Travel light with the world's smallest mini disc recorder. Record and edit by remote control, back-lit LCD and digital cable supplied.

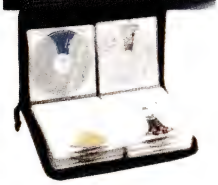
A 0997

** Not on display in all stores but may be ordered.*

SONY **$799**

Personal Audio Bags and Storage

CD Wallet for 12 CDs
C 2900
$19.95



CD Wallet for 24 CDs
C2901
$29.95

Personal stereo belt bag
With raincap.
C 2902
$29.95

Portable CD player belt bag
With 12 CD pouch and raincap.
C 2903
$29.95

Portable CD player bag
With 12 CD pouch.
C 2904
$29.95

Portable Stereos

Portable Radio/Cassette

Boasts a range of other quality features including built-in microphone and easy operation AM/FM two band reception, full auto shut-off, soft eject and tone control. Perfect for casual listening in the home, office or at the beach.
A 4191

SONY **$69.95**

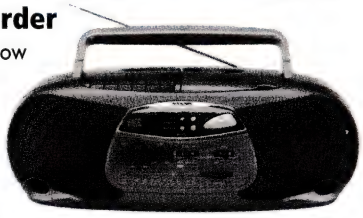
Portable Radio Cassette

A fantastic buy for any time of the year. This 10W portable radio cassette player features AM/FM radio tuner, continuous tone, single cassette, two-way speakers, pause control, one-touch recording and headphone jack.
A 4270

SANYO **$59.95**

CD/Radio Cassette Recorder

Experience quality sound at a great low price! This system from Sanyo offers you CD player, AM/FM radio, bass and tone controls, as well as synchronised CD dubbing, and 16 programmable CD memories. Sleek, portable and dependable, this system is perfect for home, office or wherever quality CD listening is enjoyed.
A 0200



SANYO **$179**

CD/Radio Cassette Recorder

If you want to experience Sony quality at a great price, take a look at this affordable system. Super features include CD player, cassette deck, AM/FM radio, tone control, 1 bit D/A converter for excellent CD sound, synchronised CD dubbing and a bass reflex body for real audio punch in the lower ranges. This rugged and portable model is an impressive performer for a compact system.
A 5503

SONY **$189**

CD Radio Cassette

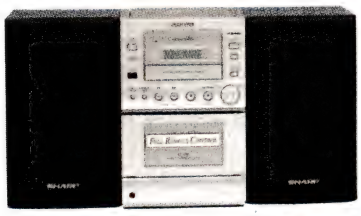
This new model CD player has a synthesised tuner, 100W PMPO, clock timer function, four pre-set sound modes, Megabass and new bass boost.
A 5497

NEW FOR '99

SONY **$249**

SHARP Micro Hi-Fi System

Featuring single CD player with synchro recording, single cassette deck and 30 AM/FM station presets for all your listening needs. With X-BASS system, clock/timer/sleep function and full system remote control.
A 0176



SHARP **$299**

Desktop Recorder

A small portable cassette recorder suitable for note taking, computer data recording or just listening. With automatic level control recording, tape counter, mic jack and AC power cord.

A 4031

digitor

$59

Desktop Cassette Recorder

Offers all the functions you need for desktop recording including: one-touch recording, edit function, tape counter and auto-stop cassette. Includes AC adaptor.

A 4022

SONY

$75

Standard Notetaker

This voice-activated notetaker has one-touch recording and an auto stop. Includes a built-in wide range speaker, built-in microphone, LED record indicator.

A 5349

digitor

$49.50

Standard Notetaker

Compact recorder with an electric pause switch, tape counter, front speaker, auto stop mechanism and recharging capabilities.

A 4710

SANYO

$59.95

Notetaker With Edit Function

Ideal for recording conferences or lectures, this reliable notetaker has one-touch recording. It's easy to operate, offering cue, review and auto-stop functions, plus an edit function and front speaker.

A 5450

SONY

$69

AM/FM Radio Cassette Recorder

This AM/FM stereo player has one-touch recording system, built-in dual stereo speakers, built-in microphone, FM stereo LED indicator, built-in 3V DC input jack.

A 4280

digitor

$69.95

Standard Cassette Recorder

Compact, voice-activated recorder with auto-stop mechanism, three-digit tape counter, electric pause switch, rechargeable capability, microphone jack and front speaker for greater clarity.

A 4711

SANYO

$79.95

Voice-Activated Notetaker

This notetaker will take care of all your lectures or conferences with its voice-activated operation and one-touch recording. Also has edit, cue, review, automatic-stop functions and a tape counter.

A 5451

SONY

$129

Notetaker with built-in Clock Radio

Featuring a handy built-in alarm clock as well as AM/FM radio, this dependable notetaker boasts one-touch recording, quick review, tape counter, pause control, auto stop and built-in mic. Uses standard cassettes.

A 5526

SANYO

$99.95

Stereo Notetaker/Cassette Player

Top of the Range

Simple one-touch operation makes it ideal for notetaking. Features built-in variable sensitivity mic, tape counter, voice-operated recording, variable speed control and playback equaliser. Includes stereo earphones and deluxe carry case.

A 5447

SONY

$299

Micro Notetaker

This 2-speed, voice-activated notetaker has a tape counter and in-built microphone. Includes one micro-cassette and lapel microphone. AC adaptor optional. Uses 2 x 'AA' batteries (not included).

A 5347

digitor

$65

Micro Notetaker

This micro cassette recorder player has two-speed recording, quick recording review, pause, front speaker and rechargeable capability.

A 4712

SANYO

$79.95

Micro Notetaker

With 2-speed record and play, cue and review and 24-hour long record battery life.

A 5443

SONY

$79

NEW FOR '99

Micro Notetaker

Voice activated micro cassette recorder with tape counter, external mic jack, quick recording and review, a front speaker, rechargeable capability, pause control and two-speed recording.

A 4713

SANYO

$99.95

Micro Notetaker

Features a clear voice filter, voice mirror, voice activated recording, cue and review, 2-speed record and play, tape counter, 24-hour record battery life.

A 5479

SONY

$99

NEW FOR '99

Micro Notetaker

Take notes using clear voice filter and voice mirror! Other features include auto reverse playback, cue and review, tape counter, voice-activated recording, external microphone jack and 24-hour recording battery life.

A 5494

SONY

$139

NEW FOR '99

Conference Micro Notetaker

New design with metallic finish features clear voice, built-in stand, tape counter, VOR function, high sensitivity with a bi-directional mic, fast playback, LED indicator, 19-hour continuous recording, cue marker, DC-in jack, a built-in speaker and speed control.

A 5478

SONY

$169

Dictating/Transcribing Machine

This advanced desk-top recording unit provides professional-quality recordings. Quick and easy to use, it has a one-action slide-control handset and a cue tone index search system to add handy reference tones at the beginning of tape segments.

Features quick erase, variable back-spacing, adjustable playback speed, tape-end zone warning and tape counter. Includes headphones, micro-cassettes, AC adaptor, foot control and handset. Available in standard or micro-cassette format.

A 5601

SANYO

$799

Tapes

3 Pack Micro Cassettes
Digitor C30 30 minute micro tape.
C 3371
$7.95 pk

3 Pack Micro Cassettes
Digitor C60 60 minute micro tapes.
C 3373
$7.95 pk

2 Pack Mini Cassettes
2 x 30 minute tapes.
C 3378
$19.95 pk

PHILIPS

Single Micro Cassette
1 DMC60 60 minute micro tape.
C 3379
$3.95

TDK

3 Pack Micro Cassettes
DMC60 3-pack 60 minute micro tapes.
C 3374
$9.95 pk

TDK

Micro Cleaning Tape
Rid your machine of damaging dust and keep your tapes running smoothly.
C 7096
$7.50

SONY

Digital Voice Recorders and Organisers

Hear the Future

The future in digital recording is here. This first wave of notetakers is a taste of what's to come: they have a recording chip which never wears out, a super thin shape (some less than 2cm), and an instant search and find facility. Put your thoughts or notes onto your notetaker, download to your PC as a wave file, then email the file across the world. Insert text where you wish and bookmark crucial points. Streamline your life with a digital notetaker.

Digital Notetaker
NEW FOR '99

Take notes with ease! Holds up to 297 average-sized messages, easy to edit, two play modes, 99 index marks, three files, backlit LCD, playback speed control and 16/32 minute record time.
A 5495
$199

SONY

Voice It Manager
This handy device provides over 30 minutes of crystal clear digital recording time. Play back your thoughts and notes in any order. LCD display shows time and date of recordings, flash memory technology keeps messages when batteries are depleted. Uses 3 x 'AAA' batteries.
A 5442
$299

Digital Notetaker
Record your notes in digital format for more control and easy operation. This super slim 12.5mm think note taker links to your PC, has a message alarm, speed control, 60/150 minutes recording time, marks priority messages and has a large LCD. *Available in selected stores.*
A 5496
$449

SONY

Voice It VR 5000
With 50 minutes of recording capacity, this Voice IT VR5000 palm-sized pager features CD player-like controls which allows instant access of messages to be played, erased or edited. Can be down-loaded to a PC and has a leather carry case.
Available in selected stores.
A 0052
$249

Voice Chip
Additional 50 minute voice chip for the *VR 5000.*
Available in selected stores.
A 0053
$99

KC 20 Cassette/Radio

AM/FM analogue tuning radio. Auto stop/fast forward cassette mechanism. Rotary on-volume, balance and tone control. Tape and stereo LED indicator and mono/stereo selector. 2 x 7 Watts power output. 6 gang metal tuner.
A 9502

SOUND BARRIER QUALITY AUTO STEREO SOUND

$69.95

KC 40 Cassette/Radio with Detachable Face

AM/FM Radio Cassette. Detachable Face. Auto Stop. CD input jack. Local/distance selection. LED display.
FM 87.5MHz-108.5MHz.
AM 520-1640KHz.
A 5559

SOUND BARRIER QUALITY AUTO STEREO SOUND

$99

KC 202 Radio/Cassette

AM/FM radio cassette. Full security detachable face. 20 x 2 Watt output front and rear. 30 Station Preset Memory (FM 18 AM 12). Bass Treble Balance and Fader Controls. AM 520-1610KHz. FM 87.5-108MHz. RCA Line Output. CD Line input.
A 5558

SOUND BARRIER QUALITY AUTO STEREO SOUND

$195

KCD 1010 Car CD Player/Radio

High power front loading CD and AM/FM radio. 2 x 25 Watts power output. Detachable front panel for security. Electronic volume control. LCD multi function display. RCA line output. 30 station preset memory. Anti shock CD mechanism.
A 9510

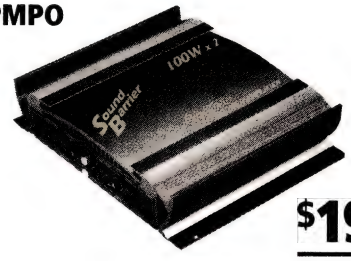
SOUND BARRIER QUALITY AUTO STEREO SOUND

$299

Amp 100 Watt x 2 PMPO

50 Watt RMS x 2 channel bridgeable amplifier
A 9545

SOUND BARRIER QUALITY AUTO STEREO SOUND

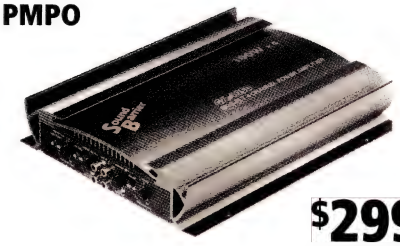


$199

Amp 100 Watt x 4 PMPO

50 Watt RMS x 4 channel bridgeable amplifier.
A 9560

SOUND BARRIER QUALITY AUTO STEREO SOUND



$299

Car CD Kit

Easily fitted to almost any vehicle and compatible with most makes of portable CD players. This kit features anti-vibration cradle and flexible mount arm. Comes with CD cassette adaptor and universal power adaptor (plugs into cigarette lighter).
C 9211

$89.95

Mobile Audio Connector SF100

Requires no wiring! Simply converts the audio signals from your portable CD player and transmits them via an FM radio frequency to your car radio. Includes power supply (300mA maximum output).
C 9207

$49.95

CD Cassette Adaptor Set

Allows you to play your portable CD player through your car stereo cassette. Plus, it powers the CD player from the car battery so you'll save on batteries!
C 9206

PHILIPS

$49.95

CD Cassette Car Adaptor

The CD-55 car adaptor has been designed to cost-effectively allow you to connect your portable CD player into the cassette player in your car. Simply plug the cassette adaptor into the headphone socket on the CD player.
C 9212

$34.95

Gold DC Power Connectors

Gold Battery Terminals

Positive Terminal D 6104
Negative Terminal D 6106

$9.95 ea

Gold 5AG In-Line Fuseholder

D 6118

$9.95

Gold Battery Terminals

Positive Terminal D 6100
Negative Terminal D 6102

$9.95 ea

Fused Power Distribution Block

2 x 5AG fuse holders
D 6122

$19.95

Gold Power Lug

Suits 8GA cable
D 6112

$6.95

Fused Power Distribution Block

4 x 5AG fuse holders
D 6124

$29.95

Power Distribution Block

4GA inlet, 4GA outlet, 4x8GA outlets
D 6120

$9.95

5AG Gold Fuses

Packs of 2pcs

20A Fuses	D 6132
30A Fuses	D 6134
40A Fuses	D 6136
50A Fuses	D 6137
60A Fuses	D 6138

$2.95 pk

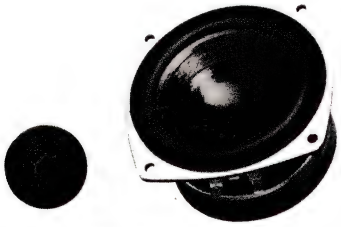
Sound Barrier HR Speakers

Surface mount tweeter 150W	A 0705	$79.00
HR400 4" (100mm) 100W	A 0700	$89.00
HR500 5 1/4" (125mm) 120W	A 0701	$99.00
HR650 5 1/2" (165mm) 160W	A 0702	$109.00
HR690 6" x 9" (150 x 235mm) 200W	A 0703	$149.00

Sound Barrier JR Speakers

SOUND BARRIER QUALITY AUTO STEREO SOUND

Car speakers 4" dual cone JR101	A 9651	$19.95
Car speakers 4" two-way JR202	A 9656	$39.00
Car speakers 5.25" two-way JR404	A 9666	$43.90
Car speakers 6.5" three-way JR606	A 9676	$59.90
Car speakers 6 x 9" three-way JR909	A 9681	$69.95
Speaker 6 x 9" JR910	A 0707	$89.95

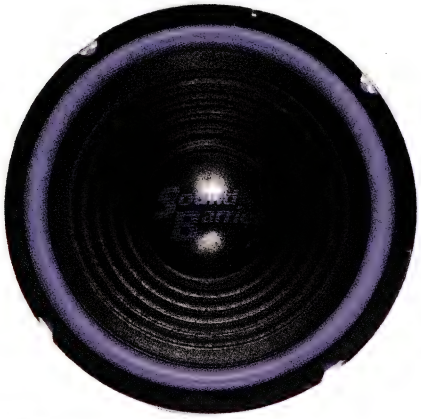


NEW FOR '99

Harmony

Harmony Split Systems

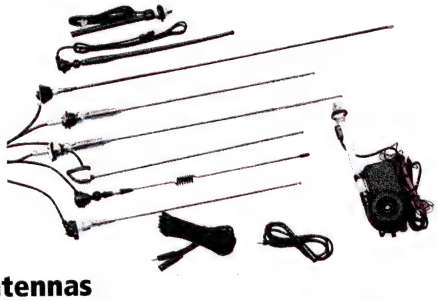
Car speaker 4" split	A 9850	NEW	$259
Car speaker 5 1/4" split	A 9851	NEW	$299
Car speaker 6 1/2" split	A 9852	NEW	$349



Sub Woofer

SOUND BARRIER QUALITY AUTO STEREO SOUND

Sound Barrier sub woofer AW100, 250W	A 0706	$79.00
Harmony car speaker 10" sub	A 9853	$179.00
Harmony car speaker 12" sub	A 9854	$229.00



Auto Antennas

Digitor antenna universal replacement mast	A 7314	$9.95
Digitor antenna auto L3 lockdown	A 7300	$13.75
Digitor antenna inside window mount	A 7301	$15.95
Digitor antenna auto side mount	A 7344	$21.95
Digitor antenna auto rubber duck	A 7345	$21.95
Digitor antenna auto standard ball base	A 7346	$21.95
Digitor antenna Commodore lockdown	A 7318	$21.95
Digitor antenna Commodore lockdown	A 7319	$21.95
Digitor antenna auto black with boost	A 7320	$21.95
Digitor antenna Falcon lockdown	A 7330	$21.95
Digitor antenna auto ball with boost	A 7347	$22.95

Mobile Antenna AM/FM Whip 30"

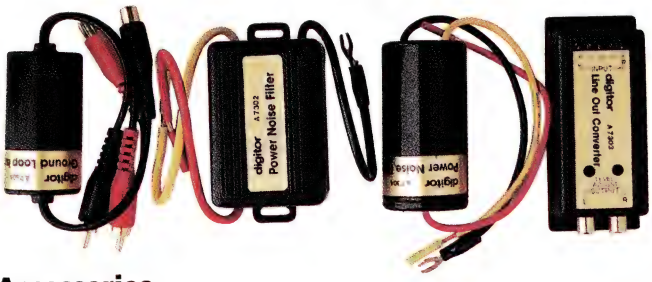
Helical-wound fibreglass antenna ideal for long distance reception.

A 7310 **$35.95**

Digitor Automatic Electric Antenna

Rises and retracts automatically. Can be triggered from either ignition or radio on/off switch.

A 7366 digitor **$59.50**

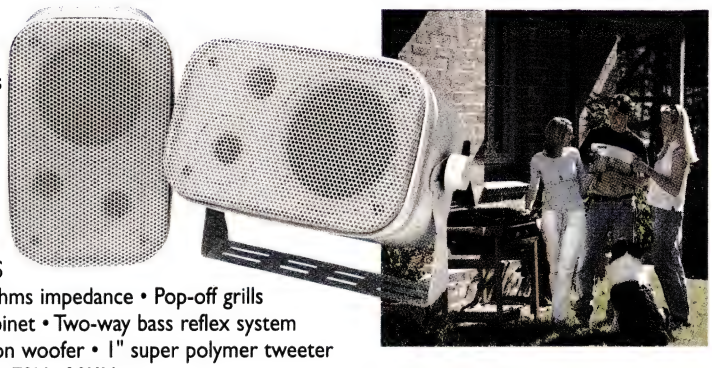


Accessories

Aero speaker spacer for 6" speaker	A 0798	$16.95
Aero speaker spacer for 6 x 9" speaker	A 0799	$19.95
Noise suppressor cap .5UFD NS5	A 7902	$5.95
Digitor automatic antenna ext lead 1 metre	A 7450	$7.95
Digitor automatic antenna ext lead 4 metre	A 7452	$12.95
DSE mounting bracket set	A 7200	$12.95
Digitor antenna line booster	A 7313	$18.95
Digitor line out converter	A 7303	$28.00
Digitor ground loop isolator	A 7305	$28.00
Digitor power noise filter 10A	A 7304	$35.00
Digitor power noise filter 30A	A 7302	$55.00

Speakers

Outdoor Speakers



Weatherproof fittings plus polypropolyne cones ensure long lasting outdoor use. Complete with wall or stand mounting brackets.
Features: 50W RMS output per pair • 8 ohms impedance • Pop-off grills • Heavy duty ABS cabinet • Two-way bass reflex system • 3 1/2" long excursion woofer • 1" super polymer tweeter • Frequency response: 70Hz-20KHz
A 9974 digitor

$89.95 pr

Stereo Speakers DC3070

Ideal as surround speakers in your home theatre system. Complete with wall or stand mounting brackets.
Features: 50W RMS output per pair • 8 ohms impedance • Pop-off grills • Heavy-duty ABS • cabinet • Two-way bass reflex system • 3 1/2" long excursion woofer • 1" super polymer tweeter • Frequency response: 70Hz-20KHz
A 9765 digitor

$89 pr

Centre Speaker

Ideal for use as a centre or main speaker in a home theatre system. Includes heavy-duty, fully-rotational stand. Magnetically shielded for use close to TV screens
Features: 40W RMS output • 8 ohms impedance • 5" woofer • 5" midrange • 1" mylar tweeter • Bass reflex system • Frequency response: 80Hz-20KHz
A 9769 digitor

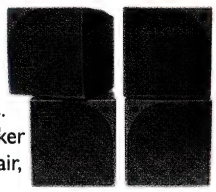
$129

Stereo Speakers DC 4070

Perfect for your home theatre system as main or rear speakers. Compact design Includes 2 heavy duty, fully-rotational stands.
Features: 100 W RMS output per pair • 8 ohms impedance • Two-way bass reflex system • 2.5mm super polymer tweeter • Frequency response: 60Hz-20KHz
A 9766 digitor

$169 pr

Swivel Speakers



Ideal for use as home theatre satellite speakers. A handsome swivel speaker system. 30W RMS per pair, 4 ohms, 2 Way.
A 9775 digitor

$69.95 pr

Stereo Speakers DC5070

Quality main speakers for your home theatre system. Complete with 2 heavy-duty, fully-rotational stands.
Features: 120W RMS output per pair • 8 ohms impedance • Pop-off grills • Heavy duty ABS cabinet • Two-way bass reflex system • 6 1/2" long excursion woofer • 1" super polymer tweeter • 1" four-layer aluminium voice coil • Frequency response: 50Hz-22KHz
A 9767 digitor

$169 pr

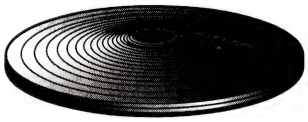
Speakers DC4085

Great for use as rear or main speakers in your home theatre system. Wall or stand mounting brackets.
Features: 60W RMS output per pair • 8 ohms impedance • 5" poly-coated woofer • 1" high compliance mylar tweeter • Frequency response: 32Hz-20KHz • Two way vented bass reflex design for great bass response
A 9768 digitor

$99 pr

Brackets

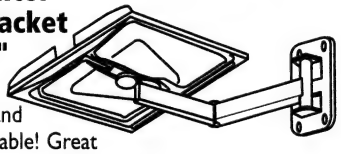
PHILIPS TV Turntable



Takes up to a 150kg TV.
G 1505

$39.95

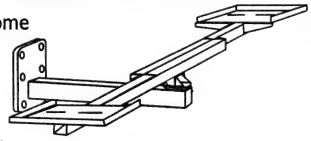
TV/Monitor Wall Bracket 14"–18"



Easy to assemble and it's expandable! Great for the home or office. Adjustable to hold 35-45cm (14"–18") TV/monitor, up to 30kg.
G 1500 digitor

$69.95

TV Wall Bracket 21"–28"



Great for home or office. Holds up to 72cm (30") TV up to 50kg. With horizontal and vertical controls, it's easily manoeuverable. Sleek satin black finish. Easy to assemble.
G 1501 digitor

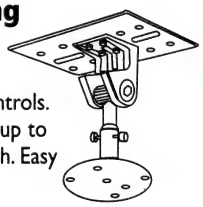
$89.95

VCR Mounting Bracket

Attaches to Dick Smith Electronics TV Wall Brackets. Great for your home or office, it's manoeuverable and easy to assemble. Holds up to 10kg. Satin black finish.
G 1503 digitor

$49.95

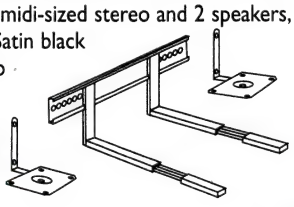
Speaker Mounting Brackets



Easily adjustable with horizontal and vertical controls. Holds most speaker sizes up to 30kg each. Satin black finish. Easy to assemble.
G 1504 digitor

$69.95 pr

Stereo and Speaker Brackets



Holds up to midi-sized stereo and 2 speakers, up to 30kg. Satin black finish. Easy to assemble.
G 1502
digitor

$21.50

All-In-One Remote

Forget trying to turn on your TV with the stereo remote control these all-in-one units manage several appliances. These units also work as replacements for lost or broken remote controls.

One Instead of Four

Credit Card 513C Universal Remote Control

Integrates up to four remote controls into one ultra-slim credit card size universal remote. Pre-programmed and easy-to-use, can replace lost or broken remotes.

G 1220

digitor **$37.95**

Fox Universal Remote Control

Programmed and Learning.

Replace up to four remotes with this versatile unit. Pre-programmed and learning capabilities allow you to replace non-standard functions from your original remote. Backlit volume and channel controls plus teletext keys.

G 1222

digitor **$59.95**

Universal Remote Control Jog Shuttle

Replace up to 8 remotes with this easy-to-use master controller! Pre-programmed and learning. Features LCD screen, teletext function and jog/shuttle control.

G 1212

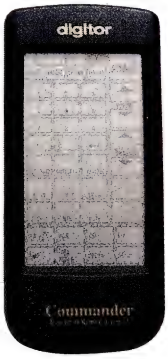
$99

Commander Remote Control

Learning with Backlight.

Reduce remote clutter with this 8-in-1, full LCD touch screen remote. With macro functions and customiable screen display. Home theatre surround/sound ready.

G 1210



digitor **$169**

Help is Just a Toll-Free Phone Call Away!

The most user-friendly universal remote controls available. If you ever have any questions or need help of any kind to program you one-for-all remote control,

Just call 1-800-064-472 (toll free)

1 For 1 Universal Remote Control

NEW FOR '99

Simple TV remote controls most brands. Includes colour and brightness control. An ideal replacement for lost or broken remotes. ***Due June '99***

G 1223

$39.70

1 For 3 Universal Remote Control

Great new design!

Throw away your stack of old remote controls. This pre-programmed unit can replace up to three remotes. Now you can access your TV and VCR from 1 remote.

G 1271

$49.70

1 for 4 Universal Remote Control

Backlit

Replaces up to 4 remotes. Pre-programmed for TVs, VCRs, cable boxes and CD players. With the support of our customer help line, you'll have no worries!

G 1261

$79.95

1 For 5 Universal Remote Control

Replaces up to 5 remotes including TV, VCR, cable boxes, CD players, audio equipment and more. Versatile and easy-to-use.

G 1250

$85

1 for 6 Universal Remote Control

Pre-programmed and easy to set up. Controls TVs, VCRs, cable boxes, audio appliances and teletext. Replaces up to 6 remotes.

G 1240

$95

Universal Remote Control A/V Producer 1 for 8

No more searching for lost remote controls, now you can conveniently access up to 8 devices in 1! This pre-programmed unit features backlit keypad, LDC, in-built record timer as well as home theatre mode, code saver, volume lock and macro functions.

G 1280

$169

Digital cameras are on the cutting edge of modern technology. By downloading from the camera to a PC, you are able to create albums on your computer, enhance or enlarge the photos that you like and e-mail your favourite to relatives and friends interstate and overseas. These are great not only for home but also work applications.

NEW FOR '99

Digipix

The new Hanimex Digipix digital camera with 640 x 480 resolution expandable memory, viewfinder and LCD screen.
Available August 99.

G 1014 Hanimex **$499**

NEW FOR '99

DX10

Features CCD sensor, a resolution of 1024 x 768, 24-bit colour, JPEG file format with two compression levels, Smartmedia card storage, and multiple image modes. Optical viewfinder, LCD monitor, built-in auto flash, self timer and digital 1.6x zoom.

G 1007 FUJI **$999**

Digital Camera with 10x Zoom

Handy removable 3.5" floppy disc holds up to 20 fine or 40 standard shots. Features a 2.5" LCD screen with solar finder & brightness control, 640 x 480 resolution, auto focus, exposure & white balance, six step exposure compensation, 1/60 to 1/4000 shutter speeds, self timer, four digital picture effects, built-in flash and date/time stamp.

G 0982 SONY **$1599**

Digital Camera Accessories

Hanimex Digipix power adaptor
G 1002
NEW FOR '99 **$59.95**

Fuji 2MB smart card
G 0986
NEW FOR '99 **$89.95**

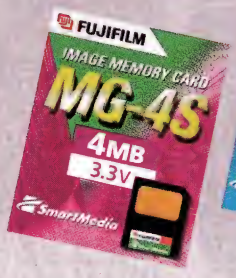
Fuji 4MB smart card
G 0987
NEW FOR '99 **$149**

Fuji 8MB smart card
G 0988
NEW FOR '99 **$229**

Sony cleaning kit for Mavica
G 0960
NEW FOR '99 **$49**

Sony semi hardcase
G 0908
NEW FOR '99 **$99**

Sony digital camera floppy deck
G 0983
NEW FOR '99 **$1299**



** Not all accessories will be available in all stores. If not available they may be ordered.*

Yet another family picnic. Dad is playing BBQ master and mum is helping prepare the food. You've had enough of nature for one lifetime. Don't get bored, get a portable TV! Watch them anywhere, anytime but beware: dad may steal it to catch up on the cricket.

12.5cm B&W AC/DC TV (5")

Great for the boat or car! You'll find this portable black and white TV perfect as a spare. Put in the guest room, car or even the boat! Features include carry handle, earphone and mains power jacks plus a telescopic antenna. Powered by an AC adaptor or a car battery. AC and car adaptors supplied.
G 7105

$129

12.5cm Colour AC/DC TV (5")

12.5cm colour portable TV. Perfect as a second TV, or for the car or boat. With auto tune, AC/DC operable, (AC power and car adaptors supplied). Features include A/V input, headphone jack, external antenna jack and telescopic antenna.
G 7205

$399

25cm TV (10")

Great for use in the boat or caravan, this 10" Colour CRT TV features AC/DC operation, on-screen display, sleep timer, 30 program memories, A/V input and infrared remote control.
G 7230

digitor

$499

5.5cm Hand-Held LCD Colour TV (2.2")

With an automatic tuning system, brightness and volume controls, tuning indicator bar and colour control. DC power and earphone jacks.
G 5526

CITIZEN™

$199

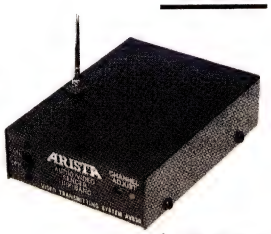
10cm TFT LCD TV (4")

Wow! Get the latest in LCD TV technology with this terrific portable TV. Features include super sharp & extra bright picture, A/V input, auto search tuning and earphone jack. Battery or DC powered AC power and car adaptors supplied.
G 7240

digitor

$399

Audio Video Transmitter

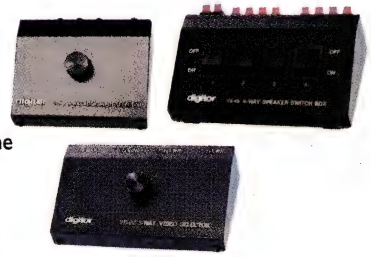


Now you can watch a video in the bedroom without buying a second VCR. A wireless video transmitter for UHF channel 30 with a transmitting distance of approximately 10 metres.
G 5560

$69.70

Switch Boxes and Mixers

Need More Input Jacks?



Whether you're having a party or just tired of swapping cables around, these switch boxes are the simplest solution to hooking up more devices to your amplifier.

3-Way Video Selector

Provides switching for stereo, audio and video signals.
C 2504

$39.50

4-Way Audio Selector

Connects up to four audio sources such as CD, video or DVD sound or tape.
C 2505

$39.50

4-Way Speaker Switch Box

Use any combination of up to four pairs of speakers at one time.
C 2507

$49.50

4-Channel Micro Mixer

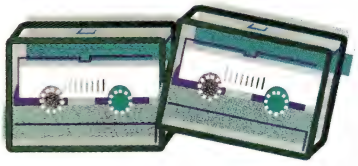
Ideal for line mixing applications, multi keyboard & drum mixing and more. (Not suited to microphone mixing). Four channels, separate volume control, single 6.5mm output, LED peak indicator, input impedance: 22K ohm, output: 10K ohm. Uses 9V (regulated) AC adaptor or 9V battery not supplied. A 8400

$65.90

Stereo Sound Mixer

Professional sound for your videos!
Add your favourite background music! Features separate volume controls for audio, microphone, music and master. Suitable for both mono and stereo mixing, includes earphone socket. Uses AC adaptor jack (9V) or 9V battery not supplied. Comes with cables.
A 8401

$89.90



Dick Smith Electronics is your one-stop shop for all those hard-to-find tapes and disks. We have a wide range of audio, video, camcorder tapes and mini disks – the latest in cutting edge technology!

Mini Disk

Imagine being able to record all your favourite songs from your CD collection onto something with an exceptionally high quality sound. Well now you can with thanks to modern technology. Mini Disk allows you to digitally record sound onto a disk that can be recorded over 1 million times! By purchasing a portable mini disk device, you can take it anywhere. Forget fast forwarding or rewinding tapes, with mini disk, you can jump to the next song like a CD. Mini Disk the latest in modern entertainment technology!

TDK

74min Mini Disk 2 Pack
C 4041
$16.95

SONY

Mini Disk 3 pack
With bonus 5 disk carry case.
C 4063
$24.95

Audio

TDK

D-120
120-minute audio tape.
C 4004
$4.95

AD-60 2 pack
Two-pack of 60-minute tapes.
C 4023
$6.95

AD-90 2 pack
Two-pack of 90-minute tapes.
C 4024
$8.95

AD-100 2 pack
Two-pack of 100-minute tapes.
C 4025
$9.95

SA-60 2 pack
Two-pack of 60-minute tapes.
C 4026
$7.95

SA-90 2 pack
Two-pack of 90-minute tapes.
C 4027
$9.95

MA-90
90-minute metal audio tape.
C 4008
$7.95

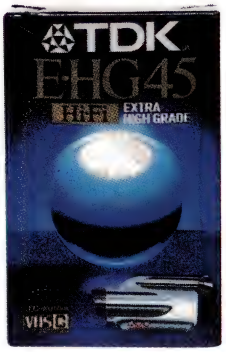
SONY

C90EF 10 pack
10 pack of 90-minute audio tapes.
C 3117
$19.95

Camcorder

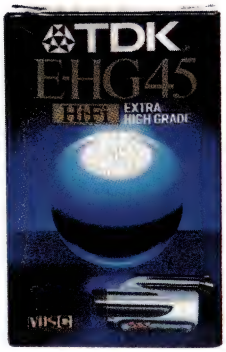
TDK

VHS-C Tape EC-45EHG
45-minute VHS video tape.
C 4016
$7.95



TDK

VHS-C Tape 45EHG 2 pack
2 pack of 45-minute VHS video tapes.
C 4031
$14.95



TDK

8mm Tape P5-90HS
90-minute 8mm tape.
C 4014
$8.95

SONY

8mm Tape P5-90MP1
90-minute 8mm tape.
C 3280
$12.95

SONY

8mm Tape P5-120MP1
120-minute 8mm tape.
C 3281
$16.95

SONY

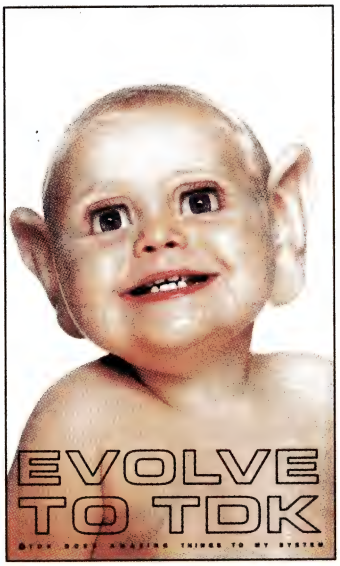
Hi8 Video Tape P5-90HMP
90-minute Hi8 8mm tape.
C 3283
$22.95

Panasonic

Panasonic Digital Video Tape
60 minute standard play and 90 minute long play.
C 3260
$24.95

Video Tapes

TDK®



TDK VHS Tape E-30HS
30-minute VHS tape.
C 4028 **$4.95**

TDK VHS Tape E-120HS
120-minute VHS tape.
C 4029 **$5.65**

TDK VHS Tape E-180HS
180-minute VHS tape.
C 4010 **$5.95**

TDK VHS Tape E-180HS 2 pack
2 pack of 180-minute VHS tapes.
C 4030 **$10.95**

TDK VHS Tape E-240HS
240-minute VHS tape.
C 4011 **$6.95**

TDK VHS Tape E-180EGH
180-minute VHS tape.
C 4012 **$7.95**

TDK SVHS Tape E-180XP
180-minute SVHS tape.
C 4013 **$12.95**

TDK VHS Tape E-180HS 5 pack
C 4036 **$19.95**

TDK VHS Tape E-180SC 3 pack
C 4052 **$9.95**

TDK VHS Tape E-240HS 4 pack
C 4058 **$24.95**

SONY VHS Tape E180DXE
180-minute VHS video tape.
C 3221 **$4.95**

SONY

VHS Tape E180DXE 5 Pack
Five-pack of VHS 180-minute tapes.
C 3223 **$19.95**

SONY

Beta Tape L750BT
195 minute Beta video tape.
C 3220 **$12.95**

Cleaning Products

Achieve even clearer, smoother sound and pictures from your cassette tapes, CDs and videos with this extensive range of cleaning products. Safely and effectively remove dust, dirt and fingerprints and prolong the life of your equipment, CDs and tapes.

Audio/Video Cleaning Fluid
Replacement cleaning fluid.
C 7511 **$3.95**

Deluxe Cleaner
Automatic head cleaner keeps cassettes in top condition.
C 7090 **$12.95**

Cleaner and Demagnetiser
For clearer, smoother sounds from cassette tapes.
C 7503 **$14.95**

CD Lens Cleaner
Cleans sensitive CD laser lenses. Removes build-up and debris.
C 7119 **$19.95**

VHS Head Cleaner
Prolong the life of valuable video tapes with this VCR head cleaner.
C 7124 **$19.95**

VHS-C Cleaner
Provides quick and effective cleaning for all VHS-C systems.
C 7122 **$19.95**

8mm Head Cleaner
An effective cleaner that does the job in a matter of minutes.
C 7123 **$19.95**

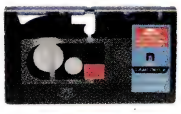
Allsop

VHS Video Cleaner
Patented wet/dry VCR cleaning system to restore audio/video performance.
C 7165 **$29.95**

CD Laser Lens Cleaner – 8 Brush
Clean laser lenses without damaging the laser assembly.
C 7162 **$39.95**

Replacement Cleaner Kit
For C 3712.
C 3713 **$14.95**

VHS-C to VHS Tape Adaptor
C 3022 **$33.95**



Car Shaped VHS Tape Rewinder
C 3716 **$47.95**

Battery Operated VHS-C to VHS Adaptor
C 3018 **$49.95**

Video Tape Cleaner & Rewinder
C 3712 **$99.90**

Earphones

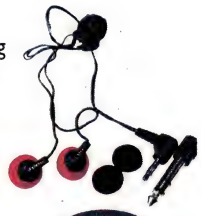
Stereo Earphones

With no headband you'll hardly realise you're wearing them. Complete with spare ear pads, 3.5mm plug and 6.5mm adaptor plug.

C 4135

digitor

$6.95



Fontopia Earphones

Around 70% less sound leakage than conventional models. Twin turbo acoustic ducts, 16 ohms, 04dB/mW sensitivity, 20-22,000Hz frequency range.

C 4407

SONY

$29.95

Deluxe Stereo Earphones

With case

Just the thing for portable stereos! Includes case and gold plated 3.5mm stereo plug. With 21 ohms impedance and a wide frequency response of 20-20,000Hz.

C 4350

digitor

$13.95

Sony Fontopia Earphones MDRE837/821V

Powerful 13.5mm drivers with Neodynium magnets. The Twin Turbo design and OFC cord give extra bass with superior sound. Includes 3.5mm gold plated plug and carry case.

C 4421

SONY

$39.95

Vertical In-Ear Headphones

Detachable In-Ear Headphones

You can wear them as mini stereo headphones, or detach the speakers and instantly they're stereo earphones! The small drivers give great sound reproduction with 21 ohms impedance and frequency response of 20-20,20,000Hz.

C4133

digitor

$14.95

Sony In-Ear Headphones MDRW08L

The perfect cross between headphones and earphones. 13.5mm drivers with Neodynium magnets, OFC cord and Twin Turbo design for powerful bass and superior sound.

NEW FOR '99

C 4418

SONY

$29.95

Lightweight Headphones

Stereo Headphones

Ideal for personal and portable stereos or your Home hi-fi, these inexpensive stereo headphones come with adjustable headband and replaceable foam earpads. 32 ohms impedance and frequency response of 20-18,000Hz.

C 4142

digitor

$11.95

Deluxe Lightweight Headphones

With a frequency of 20-18,000MHz, 32 ohms +/- impedance, a 3.5mm stereo plug and a 1.2m card.

C 4146

digitor

$16.95

Sony High Quality Headphones MDR009

High quality lightweight headphones perfect as replacement or upgrade headphones for your Walkman or Discman. Includes 23mm drivers, Twin Turbo design and wide, adjustable headband.

C 4417

SONY

$24.95

Sports Earphones & Headphones

Earhugger Earphones

With volume control

Perfect for use while exercising, playing sport or just hanging around. 13mm drivers with Neodynium magnets, 32 ohms impedance, 20-20,000Hz frequency response and gold plated 3.5mm plug.

C 4620 Black
C 4621 Green
C 4622 Yellow

$19.95

Volume Control

Sony Street Style Headphones MDRG51

The latest from Sony. The headband sits behind your head so you can keep these on while exercising. Features 30mm drivers, 104dB high sensitivity and a 16-20,000Hz frequency response.

C 4419

SONY

$49.95

Sony Street Style Headphones MDRG61

Great new design keeps these headphones in place while playing sport or exercising. 30mm drivers with Neodynium magnets. High sensitivity (105dB) and 14-24,000Hz frequency response. Superior sound quality.

C 4422

SONY

$59.95

TV Headphones

TV Headphones

With volume control!

Sit back, relax and watch TV without disturbing others. Features stereo/mono adaptor, 34mm drivers with Neodynium magnets, 32 ohms impedance, 102dB sensitivity, 20-20,000 frequency response and an extra long cord.

C 4623

digitor **$24.95**

Deluxe TV Headphones

With volume control!

They're just the thing for private listening, with extra padding for greater comfort and large 40mm speaker drivers. They come with a 3m cable, gold plated 3.5mm plug and uni-match adaptor, 32 ohms impedance and frequency response of 20-20,000Hz.

C 4162

digitor **$44.95**

Sony TV Headphones MDR201TV

With volume control!

Lose yourself in the movie with these superior quality TV headphones. Features volume control, 30mm drivers, mono/stereo switch and super long 5m cord. 24 ohms impedance and 14-20,000Hz frequency response.

C 4424

SONY **$59**

Mid/Full Size Headphones

HiFi Stereo Headphones

Lightweight and very comfortable, these stereo headphones are perfect for listening to your CD player or home stereo. They have large 40mm speaker drivers which give exceptionally good sound. Includes a 3.5mm plug and 3.5mm to 6.5mm adaptor for connection to your home stereo. 32 ohms impedance and 20-20,000Hz frequency response.

C 4148

digitor **$39.95**

Pro-Monitor HiFi Headphones

High-quality stereo monitor headphones with 40mm speaker drivers that are designed to get the best from digital source material, such as CDs. They're very comfortable with fully adjustable headstrap. They come with gold plated 3.5mm plug and 3.5mm to 6.5mm adaptor. 64 ohms impedance with a frequency response of 20-22,000Hz.

C4154

digitor **$49.95**

Sony HiFi Headphones

Get great sound from your home HiFi. Compact design with 23mm drivers and gold plated uni-match plug.

C 4423

SONY **$59**

Sony Closed HiFi Headphones

Keep the sound in and minimise outside interference! With 30mm diameter drivers and a gold plated uni-match plug, frequency response: 16-22,000Hz

C 4410

SONY **$79**

Wireless Headphones

Infra-red Mono Headphones

No wires, no tangle! Move freely around your listening area and listen to your TV or other mono audio source without disturbing others. Requires 2 x "AAA" batteries. Frequency Response: 20-12,000Hz S/N Ration: 45dB (4m) Maximum Distance: Approx. 7m

C 4230

digitor **$49.90**

Infra-red Stereo Headphones

Rechargeable

Uses superior transmission technology and features volume and balance controls. Convenient built-in recharging circuitry. Includes NiCad rechargeable batteries. Frequency Response: 20-18,000Hz S/N Ratio: 58dB Maximum Distance: Approx. 7m

C 4232

digitor **$99**

Sony Superior Quality HiFi Headphones

Positions to the angle of your ears! Self-adjusting headband, 30mm dome-type drivers produce powerful bass sound, 24 ohms impedance, 98dB/mW sensitivity, 16-22,000Hz frequency response, 3.5m OFC litz cord with uni-match plug.

C 4414

SONY **$99**

Earpieces and Accessories

Magnetic Earpiece

3m cable 3.5mm plug

C 2760

$4.95

Crystal Earpiece

3.5mm plug

C 2765

$5.95

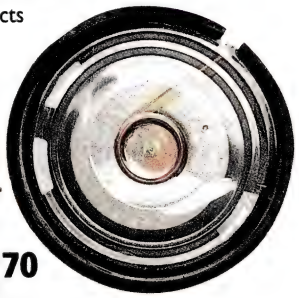
Replacement Ear Pads

13mm	C 4182	$3.95
27mm	C 4184	$5.95

27mm Mini Speaker

Great for projects where space is precious. With 8 ohms impedance and maximum power output of 0.25W. 8mm deep.

C 2208



$2.70

57mm Mini Speaker

Ideal for small radios and a wide range of kits. Maximum Power: 0.25W. 8 ohms impedance.

C 2222

$3.20

Pillow Speaker

A 16 ohms pillow speaker in a modern, rounded design, it comes complete with cord and 3.5mm mono plug.

C 2223

$13.95

Speaker Level Control

Ideal for PA systems or extension speakers. Standard L-pad design maintains 8 ohms impedance.

C 7204

$14.95

2-Way Crossover

With respectable crossover characteristics, the frequency is approximately 5kHz and the impedance is 8 ohms.
Roll Off: 6dB/octave.
System power: 60W max.

C 2512

$19.95

3-Way Crossover

It's a 2-inductor network with non-polarised capacitors giving frequencies of 1.8kHz & 8.1kHz.
Roll Off: 6dB/octave System
Power: 80W max.

C 2513

$26.95

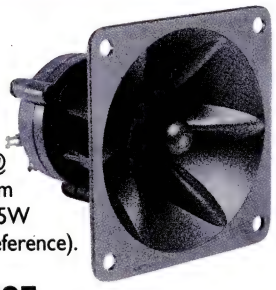
Outdoor Speakers

A series of special-purpose sound reinforcement speakers and horns from the famous Motorola company. These are very "bullet proof" units, yet they offer very low distortion, high sensitivity and excellent transient response.

KSN 1005 Superhorn

Frequency Response: 4kHz to 27kHz Average Sensitivity: 90dB @ 1m/2.83V Maximum Power Handling: 75W (8 ohms system reference).

C 2205

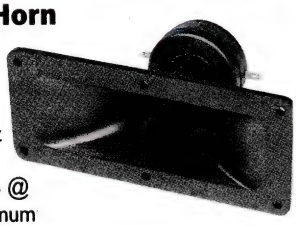


$16.95

KSN 1141 Horn Speaker

Frequency Response: 1.8kHz – 30kHz Average Sensitivity: 92dB @ 1m/2.83V Maximum Power Handling: 400W.

C 2200



$39.90

15-Watt Horn Speaker

Weather-proof, quality 125 x 165mm aluminium horn speaker. Complete with metal mounting Bracket. Suitable for all outdoor and indoor PA systems. The speaker impedance is 8 ohms and the frequency response 350Hz to 5,000Hz. Maximum power handling is 15 watts RMS.

C 2706

$59.95

Horn Speaker

Ideal for outdoor P.A. use or boating, this is a water-proof horn speaker at an incredibly low price! The speaker's impedance is 8 ohms and it has a 10-watt capacity.

C 2705

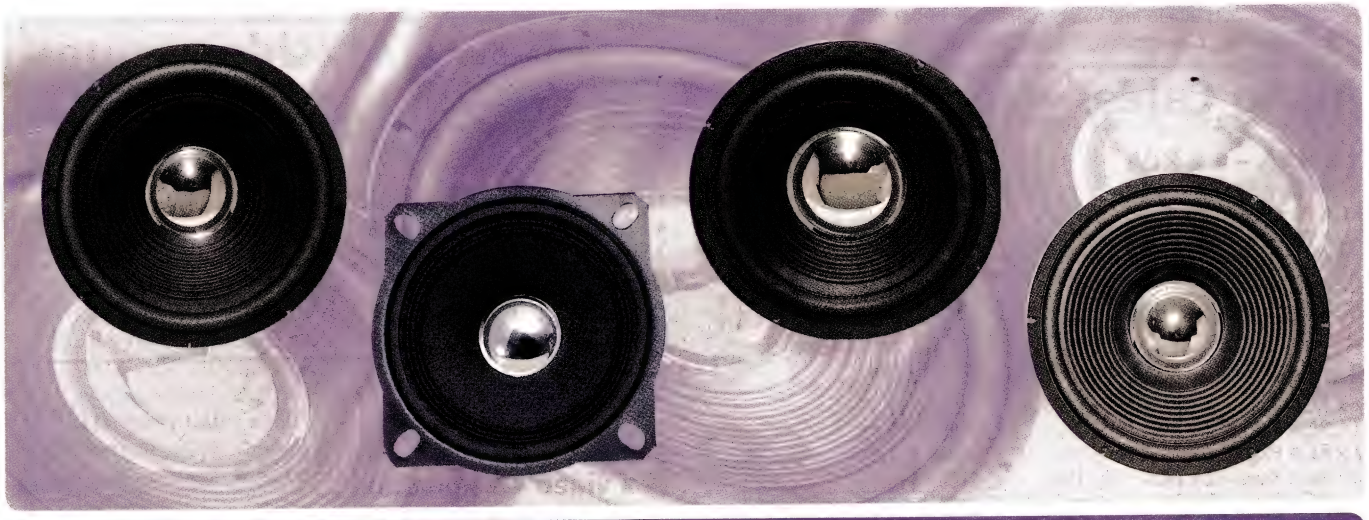
$19.95

Speaker Grille Cloth

Are your speaker enclosures looking a little shabby? This quality speaker grille cloth is easy to fit and can have those old boxes looking like new. In pack 1m x 1.5m.

C 2095

$17.95



A Sound Range of Speaker Drivers

Get more from your sound with our speaker drivers. Come into our stores and see our helpful staff for the best advice on which drivers to use. If you're building your own speakers, or just buying replacement drivers, Dick Smith Electronics is the place to go.

Mini Speaker Set

Perfect for your personal stereo or CD player! With maximum input of 0.3 watts and 8 ohms impedance.

C 4159

$29.95

Mini Stereo Amplifier Speakers

The BassBoost switch will give you depth of sound and its separate volume controls mean you can get exactly the balance you want. With LED power-on indicator and AC power adaptor jack. Requires 4 x 'AA' batteries.

C 4156

$39.95

Dynamic Stereo Speakers

Simply plug these into the phone jack of your personal CD or cassette player for great sound everyone can hear! They provide 4 watts of power and include a power-on indicator and DC jack. Requires 4 x 'C' batteries.

C 4169

$49.95

Amplified Speakers

Ideal for your CD player or stereo, these 4W magnetically shielded speakers are also great for computers. Features volume control, bass boost, treble boost, power on/off and headphone jack. Requires 4 x 'C' batteries or a 6V DC adaptor.

C 4080

digitor

$59.95

Koss Computer Speakers

Dual amplified stereo speakers with 3.5" drivers, features 4.5 watts per channel amplifier (36W PMPO) for improved output, bass and treble boost for accurate acoustic reproduction and volume control for convenient level adjustment. Includes 9 volt DC 1 Amp adaptor.

C 4199

$149

Wireless Speakers

Using advanced infra-red technology, these speakers are ideal for stereo TV, hi-fi, multimedia and surround sound! With individual volume controls and range of up to 10m, they're portable and easy to install. Requires 8 x 'D' batteries or 2 x 6V 500mA DC Adaptors.

C 4233

$179

A range of quality Audio and Video connecting cables already fitted with plugs. Cables are 2 metres long unless otherwise stated.

Audio Cables

1 x RCA – 1 x RCA

RCA Plug – RCA Plug 4 x 1m	C 1069	$11.95
RCA Plug – RCA Plug 2m	C 1070	$7.95
RCA Plug – RCA Plug 5m	C 1071	$9.95
RCA – RCA Plug 10m	C 1074	$11.95
RCA plug – RCA Socket 2m	C 1280	$7.95
RCA Plug – RCA Socket 5m	C 1072	$9.95

2 x RCA – 2 x RCA

2 x RCA Plugs – 2 x RCA Plugs 340mm	C 1185	$7.95
2 x RCA Plugs – 2 x RCA Plugs 2m	C 1180	$9.95
2 x RCA Plugs – 2 x RCA Plugs 5m	C 1181	$11.95
2 x RCA Plugs – 2 x RCA Plugs 10m	C 1186	$16.95
2 x RCA Plugs – 2 x RCA Sockets 2m	C 1182	$9.95
2 x RCA Plugs – 2 x RCA Sockets 5m	C 1187	$11.95
2 x RCA Plugs – 2 x RCA Sockets 10m	C 1172	$14.95
2 x RCA Plugs – 2 x RCA Piggy Back Sockets 2m	C 1245	$16.95

2 x RCA – 1 x RCA (Y-adaptors/cables)

2 x RCA Sockets – RCA Plug 250mm	C 1242	$7.95
2 x RCA Sockets – RCA Plug 1m	C 1243	$8.95
2 x RCA Plugs – RCA Plug 2m	C 1190	$8.95
2 x RCA Plugs – RCA Plug 5m	C 1170	$10.95
2 x RCA Plugs – RCA Plug 10m	C 1171	$16.95

3.5mm – RCA

Mono Plug – RCA Plug 2m	C 1080	$7.95
Mono Plug – 2 x RCA Plug 2m	C 1250	$8.95
Stereo Plug – 2 x RCA Plugs 2m	C 1240	$8.95
Stereo Plug – 2 x RCA Sockets 250mm	C 1252	$8.95

6.5mm – RCA

Stereo Plug – 2 x RCA Sockets 250mm	C 1095	$7.95
Mono Plug – RCA Plug 2m	C 1107	$8.95
Stereo plug – 2 x RCA Plugs 2m	C 1101	$9.95

3.5mm – 3.5mm

Mono Plug – 3.5mm Mono Plug 2m	C 1090	$7.95
Mono Plug – 3.5mm Mono Socket 2m	C 1150	$7.95
Stereo Plug – 3.5mm Stereo Plug 2m	C 1158	$7.95
Stereo plug – 3.5mm Stereo Socket 2m	C 1159	$9.95
Stereo Plug – 3.5 Stereo Socket 5m	C 1165	$16.95

6.5mm – 6.5mm

Mono Plug – 6.5mm Mono Socket 2m	C 1122	$7.95
Mono Plug – 6.5mm Mono Socket 4m	C 1103	$14.95
Stereo Plug – 6.5mm Stereo Socket Coil Lead 4m	C 1119	$11.95
Stereo Plug – 6.5mm Stereo Socket 5m	C 1166	$16.95
Mono Plug – 6.5mm Mono Right Angle Plug Coil Lead 4m	C 1109	$11.95
Mono Plug – 6.5mm Mono Plug 2m	C 1121	$7.95

DIN

5 Pin DIN – 5 Pin DIN Plug	C 1011	$9.95
5 Pin DIN – 2 RCA Plugs 2m	C 1021	$9.95
5 Pin DIN Plug – Socket 2m	C 1046	$9.95
5 Pin DIN – 4 RCA Plugs 2m	C 1040	$11.95

Other assorted audio cables

4 x RCA Plugs – 4 x RCA Plugs 2m	C 1061	$11.95
3.5mm Stereo Plug – 2 x 3.5mm Stereo Socket 1m	C 1161	$9.95
3.5mm Plug – Twin Wire 1m	C 1081	$6.95

Video Cables

3 x RCA – 3 x RCA (1 x video + 2 x audio)

Video 3 x RCA – 3 x RCA Plug – 2m	C 1289	$16.95
Video 3 x RCA – 3 x RCA plug – 5m	C 1423	$24.95

1 x RCA – 1 x RCA (75 ohm)

Video RCA Plug – RCA plug 2m	C 1288	$11.95
Video RCA plug – RCA Plug 5m	C 1421	$14.95
Video RCA plug – RCA plug 10m	C 1422	$19.95

SCART

Scart – Scart plug 1.5m	C 1210	$23.95
Scart – 6 x RCA & 2 x BNC/RCA	C 1235	$23.95
Scart – SVHS + 2 x RCA plugs	C 1236	$16.95

TV (Coaxial)

TV Plug – TV Plug 2m	C 1400	$7.95
TV Plug – TV Plug 4m	C 1401	$9.50
TV Plug – TV Plug 10m	C 1420	$12.95
TV Plug – TV Socket 2m	C 1405	$7.95
TV Plug – TV Socket 4m	C 1406	$9.50
Video RCA – TV Plug 2m	C 1286	$11.95

SVHS

4Pin SVHS – 2 x RCA Plugs 1.5m	C 1233	$9.95
4Pin SVHS – 4Pin SVHS 1.5m	C 1234	$11.95

BNC

BNC Plug – RCA Plug 1.5m	C 1290	$11.95
Video BNC – BNC Plug 2m	C 1285	$14.95
8Pin – 2 x RCA + 3.5mm w/BNC	C 1232	$19.95

Video Adaptor Pack

Universal Video Adaptor Set	C 1287	$29.95

Cable Control

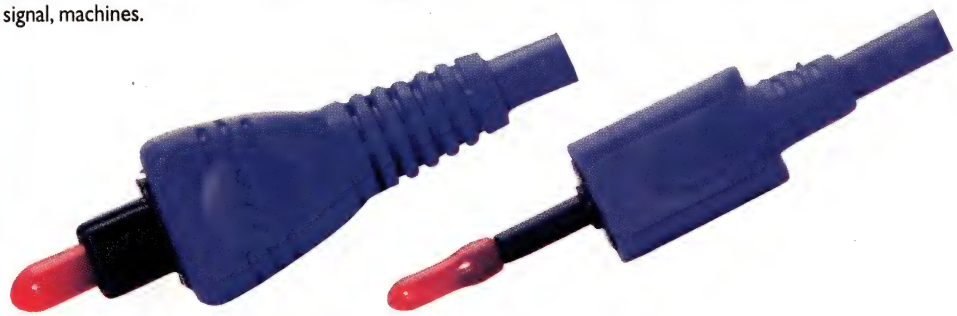
Loom Tube 3m Split Conduit Black	C 0011	$12.95

Optical Cables

Harmony Cables

Terrific range of high quality and ultra-high quality audio and video cables. Particular attention has been paid to the quality of the connectors and cable, the soldering process and the shielding. Enhance the quality of your audio and video equipment with **Harmony Cable and Harmony Gold Cable** Every Harmony cable is also available in an equivalent premium quality cable.

These high quality cables are fantastic for transferring digital signals, producing a top quality sound. Dick Smith Electronics introduces a wide range of these cables for Mini Disk and other digitally transferring signal, machines.



C 0061 **$49.50**	C 0064 **$59.50**	C 0062 **$49.50**	C 0063 **$49.50**
Tos to Tos 2 metres	Tos to Tos 5 metres	Tos to 3.5 2 metres	Tos to 3.5 5 metres

Audio

	Harmony		Harmony Gold	
1 x RCA – 1 x RCA	**Cat No.**	**Price**	**Cat No.**	**Price**
Cable RCA Plug – RCA Plug 2m	C 1900	$14.95	C 1920	$21.95
2 x RCA – 1 x RCA				
Cable 2xRCA Plug – 1RCA Plug 2m	C 1901	$19.95	C 1921	$29.95
Cable 2xRCA Plug – 1RCA Plug 5m	C 1902	$24.95	C 1922	$34.95
Cable 2xRCA Plug – 1RCA Plug 10m	C 1903	$29.95	C 1923	$39.95
2 x RCA – 2 x RCA				
Cable 2xRCA Plug – 2xRCA Plug 2m	C 1904	$24.95	C 1924	$36.95
Cable 2xRCA Plug – 2xRCA Plug 5m	C 1905	$29.95	C 1925	$39.95
Cable 2xRCA Plug – 2xRCA Plug 10m	C 1906	$34.95	C 1926	$47.95
Cable 2xRCA Plug – 2xRCA skt 5m	C 1908	$29.95	C 1928	$39.95
Cable 2xRCA Plug – 2xRCA skt 10m	C 1909	$34.95	C 1929	$49.95
3.5mm – 2 x RCA				
Cable 3.5mm Plug – 2xRCA Plug 2m	C 1907	$24.95	C 1927	$37.95

Video

TV (Coaxial)	**Cat No.**	**Price**	**Cat No.**	**Price**
TV plug-TV socket 2m	C 1940	$19.95	C 1960	$24.95
TV plug-TV socket 4m	C 1941	$22.95	C 1961	$28.95
TV plug-TV plug 2m	C 1942	$19.95	C 1962	$24.95
TV plug-TV plug 4m	C 1943	$22.95	C 1963	$28.95
TV plug-TV socket 10m	C 1944	$26.95	C 1964	$36.95
SVHS – SVHS				
4 Pin SVHS – 4 Pin SVHS 2m	C 1950	$19.95	C 1970	$27.95
1 x RCA – 1 x RCA (75 ohm)				
Video RCA Plug-RCA Plg 2m	C 1945	$15.95	C 1965	$22.95
Video RCA Plug-RCA Plg 5m	C 1946	$19.95	C 1966	$29.95
Video RCA Plug-RCA Plg 10m	C 1947	$24.95	C 1967	$38.95

Audio/Video

3 x RCA – 3 x RCA
(1 x video + 2 x audio)

3xRCA plugs –	**Cat No.**	**Price**	**Cat No.**	**Price**
3xRCA – 2m	C 1948	$33.95	C 1968	$49.95
3xRCA plugs –				
3xRCA – 5m	C 1949	$39.95	C 1969	$59.95

Dynamic Microphones

Cassette Microphone
Can be used with most cassette recorders with a low impedance microphone input. It comes with a 3.5mm plug, 2.5mm plug (for remote switching) and desk stand.
Impedance: 500 ohm
Frequency Response: 100Hz to 10kHz
Sensitivity: -76dB
C 1016 **$13.95**

Uni-Directional Mic With 'Anti-Pop' Filter
Tough mic, ideal for bands, PA work or home recording. 3m lead, on/off switch and case.
Impedance: 600 ohm
Frequency Range: 80-12,000Hz
Sensitivity: -78dB+/-3dB
C 1505 **$23.95**

Dynamic Microphone
A bargain price for a mic that suits most types of recording! Made from durable plastic, with a 4.5 metre cord fitted with a 6.5mm plug.
Frequency Response: 80-12,000 Hz
Sensitivity: -72+/-3dB
Impedance: 600 ohm
C 1506 digitor **$33.95**

Wireless/Wired Microphone
Use as a cordless mic tuned into FM radio frequency or as a low impedance mic. Has 3-metre cord and telescopic rod antenna, dynamic insert and uses 2 x AA batteries.
Pattern: Uni-directional
Frequency: 90MHz (variable)
Impedance: 600 ohm
Plug: 6.5mm
C 1583 **$46.95**

Metal Dynamic Microphone
Quality mic constructed from diecast Zinc attached to a 4.5m cord fitted with a 6.5mm phone plug.
Frequency Response: 60-15,000 Hz
Impedance: 600 ohm
Sensitivity: -75+/-3dB
C 1509 **$49.50**

Metal Uni-Directional Dynamic Microphone
Complete with a 4.5m cord, 6.5mm phone plug and a durable case.
Frequency Response: 80-15,000Hz
Sensitivity: -76+/-3dB
Impedance: 600 ohm
C 1510 **$65**

Professional Quality Microphone
Heavy duty, great sound quality.
Frequency Response: 80-15,000 Hz
Impedance: 500ohm
Sensitivity: -75+/-3dB
Cord: approx.4.5m
Housing: Die Cast Zinc
C 1511 **$79.90**

Professional Anti-Roll Microphone
A dynamic microphone with professional quality insert. Unique anti-roll surround keeps microphone safe on flat surfaces.
Frequency Response: 80-15,000Hz
Impedance: 500 ohm
Sensitivity: -73+/-3dB **Cord:** 5m
Housing: Die Cast Zinc
C 1512 **$99**

Accessories

Microphone Windscreen
Thick, durable foam replacement to cover the business end of your microphone.
C 1265 **$4.95**

Microphone Holder
Simply clips on to stand. With screw for adjustment, it fits most microphones.
C 1272 **$7.95**

Mic. Cable
Six-metre microphone cable fitted on one end with a 3-pin XLR plug and a 6.3mm plug on the other.
C 1275 **$17.95**

Balanced Mic. Cable
Strong six-metre microphone cable that is fitted on both ends with 3-pin XLR plugs.
C 1277 **$24.95**

Electret Microphones

Omni-Directional Condenser Lapel Microphone
This compact, clip-on microphone will come in handy for most types of recordings.
Frequency Response: 0-18,000Hz
Sensitivity: -65+/-3dB
Output Impedance: 1K ohm
C 1062 **$27.95**

Electret Insert
With leads
Omni-directional.
Sensitivity: -62+/-3dB
Impedance: <2K ohm
Frequency Range: 50-12,500Hz
C 1163 **$3.25**

Microphone Stands

Desk Stand
C 1600 **$13.95**

Microphone Desk Stand
With flexible goose neck
C 1602 **$29.95**

Microphone Floor Stand
Extends from 1 to 1.65m
C 1607 **$69.95**

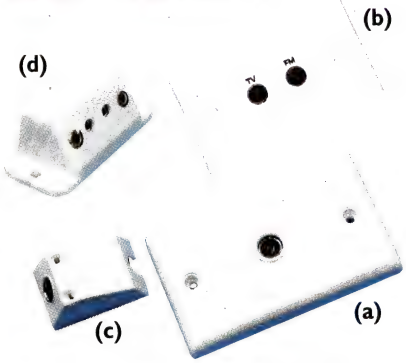
Wall Plates

	Cat No.	Price
Large	P 2053	$3.95
Small (Architrave)	P 2051	$3.00

Inserts

300 Ohm Socket	P 2056	$3.95
75 Ohm Socket	P 2054	$3.00

Wall Outlets



	Cat No.	Price
Large Plate with Coax Socket and Splitter (a)	P 2042	$7.95
Large Plate with 75 Ohm TV and FM Socket (b)	P 2043	$7.95
Surface Mount with Single 75 Ohm Socket(c)	P 2044	$3.95
Surface Mount with Single 300 Ohm Socket(d)	P 2081	$2.50

TV Connectors – Screw Terminals

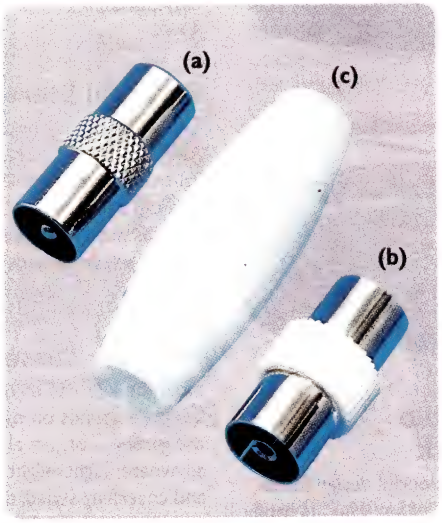
	Cat No.	Price
300 Ohm Line Plug	P 2084	$2.20
75 Ohm Line Plug, Metal	P 2020	$2.00
75 Ohm Line Socket, Metal	P 2030	$2.00
75 Ohm Line Plug, Plastic	P 2021	$1.65
75 Ohm Line Socket, Plastic	P 2031	$1.65
75 Ohm Socket, Panel Mount, Solder Terminals	P 2046	$2.20

General

	Cat No.	Price
'F' plug to suit RG 11U (Satellite)	P 2010	$14.95
SCART Plug 21 pin video	P 2005	$5.00
RGB Monitor Plug. 8 pin	P 2682	$3.90
Car radio antenna line plug screw terminals	P 2001	$2.50
Car radio antenna line socket, screw terminals	P 2002	$2.50
Car radio antenna socket panel mount, solder terminals	P 2004	$1.20

BNC Adaptors

Socket to Socket	P 2265	$3.95
3 socket 'T' Adaptor	P 2275	$5.00
Plug to Twin Socket 'T' Adaptor, Standard	P 2277	$5.00
Plug to Twin Socket 'Y' Adaptor Heavy Duty	P 2279	$5.95
Plug to SO239 Socket	P 2230	$5.00
Socket to PL259 Plug	P 2240	$5.00
Plug to RCA Socket	P 2250	$4.00
Socket to RCA Plug	P 2255	$5.00
Male Terminator, 50Ohms	P 2280	$3.85



Coax Adaptors/Joiners

Socket to 3.5mm Plug	P 2035	$3.85
Plug to Plug (a)	P 2072	$2.00
Socket to Socket (b)	P 2070	$2.00
Cable Joiner, screw terminals (c)	P 2075	$2.00

Adaptors Audio/Video

	Cat No.	Price
2.5mm Mono Plug to 3.5mm Stereo Sockets	P 6515	$2.00
3.5mm Stereo Plug to 2 x 3.5mm Stereo Sockets	P 6525	$3.95
3.5mm Mono Plug to 2 x 3.5mm Stereo Sockets	P 6527	$3.95
3.5mm Stereo Plug R/A to 3.5mm Stereo Socket	P 6620	$4.95
3.5mm Mono Plug to 3.5mm Stereo Socket	P 6600	$2.00
3.5mm Mono Plug to RCA Socket	P 6560	$2.00
3.5mm Mono Plug to 6.5mm Mono Socket	P 6510	$2.00
3.5mm Mono Plug to 6.5mm Stereo Socket	P 6570	$2.00
3.5mm Stereo Plug to 6.5mm Stereo Socket	P 6505	$2.00
3.5mm Stereo Socket R/A to 6.5mm Stereo Plug	P 6625	$4.95
6.5mm Stereo Plug to 3.5mm Stereo Socket	P 6500	$2.00
6.5mm Mono Plug to 3.5mm Stereo Socket	P 6502	$2.00
6.5mm Mono Plug to 3.5mm Mono Socket	P 6520	$2.00
6.5mm Mono Plug to 6.5mm Stereo Socket	P 6580	$2.00
6.5mm Mono Plug to RCA Socket	P 6530	$2.00
3.5mm Mono Socket to RCA Plug	P 6540	$2.00
6.5mm Mono Socket to RCA Plug	P 6550	$2.00
RCA Plug x 1 to RCA Plug x 1	P 6614	$2.00
RCA Plug to 2 x RCA Sockets, 'Y' Splitter	P 6610	$4.00
RCA Plug to 2 x RCA Sockets, Gold Flash, Offset	P 6612	$5.95
RCA Socket to RCA Socket	P 6565	$2.00
RCA Sockets x 2 to RCA Sockets x 2	P 6567	$3.95
RCA Sockets x 3 to RCA Sockets x 3, Gold Flash	P 6568	$5.95

TV/Video

	Cat No.	Price
BNC Plug to SO239 UHF Socket	P 2230	$5.00
BNC Socket to PL259 UHF Plug	P 2240	$5.00
BNC Plug to RCA Socket	P 2250	$4.00
PL259 UHF Plug to 2 x SO239 Sockets 'T' Type	P 2384	$8.95
S0239 UHF Socket R/angle to PL259 UHF Plug	P 2382	$8.95
SO239 UHF Socket to RCA Plug	P 1455	$3.95
SO239 Socket to SO239	P 2380	$3.95
N Plug to SO239 Socket	P 2415	$9.95
N Plug to BNC Socket	P 2417	$9.85
N Socket to N Socket	P 2420	$9.85
'F' Plug to 75 Ohm Socket	P 2037	$3.00
'F' Socket to 75 Ohm Plug	P 2036	$3.00
75 Ohm Socket to 3.5mm Mono Plug	P 2035	$3.85

KoolShades For the coolest fun in town

Mini Boom Box

Kids will love this AM/FM compact boom box radio with twin speakers, easy tuning and headphone jack. A fold down carry handle means they can enjoy their favourite sounds wherever they go.

A 0501 **$17.50**

Mini Radio Cassette

Whether its playing their favourite cassettes or catching up with the latest in AM/FM radio listening, the kids will appreciate this attractive and durable mini radio cassette player. Lightweight, compact, easy to use, and fun!

A 0505 **$29.50**

AM/FM Radio Alarm Clock

Its bright and colourful design makes waking up heaps of fun! Plus, its handy night light keeps kids out of the dark. With snooze function.

A 4369 **$39.50**

AM/FM Headphone Radio

Now you can wear your radio! This radio is mounted on an adjustable headband that folds up when not in use. With comfortable soft padded earpads.

A 4362 **$21.50**

Cassette Player Stereo

Compact stereo cassette player with locking fast forward, play and stop buttons, and auto stop system. Plays standard cassette tapes and has volume control, lightweight stereo headphones and belt clip. Uses 2 x 'AA' batteries (not included).

A 4364 **$18.90**

Personal Radio With Speaker

An attractively styled personal AM/FM radio for younger listeners! With durable circuitry, telescopic antenna and dynamic speaker. Features a built-in belt clip for easy portability.

A 0502 **$9.95**

Personal Stereo Radio

This economically priced, rugged and fun AM/FM personal stereo receiver includes lightweight headphones, smooth tuning, belt clip and a stereo LED indicator. Now the kids need never be without their favourite radio sounds!

A 0500 **$22.50**

Portable Cassette Player

Now the kids can enjoy their favourite sounds on the beach, in the garden – or just about anywhere! Lightweight, rugged and cheerfully styled, this portable cassette player is guaranteed to bring a smile to their faces!

A 0506 **$69.95**

Stereo Cassette

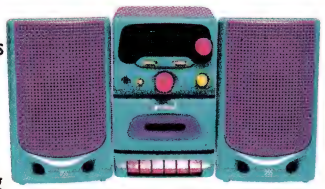
This brightly-coloured stereo radio cassette comes complete with two mini speakers as well as headphones for private listening. Features auto-stop cassette and AM/FM reception.

A 4361 **$39.95**

Mini Component System

Kids who love their music will love this wonderful mini component system, designed especially for younger music fans but packed with grown-up quality. Ideal for the kids' bedroom, den or family room, this system has everything the young music fan could want including CD input.

A 0507 **$79.95**



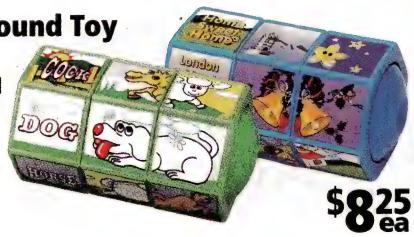
Fantastic Puppy

Barks and somersaults! Great fun for kids. Uses 2 x AA batteries (not included)
Y 2522

$12.95 ea

Musical Twist 'N' Sound Toy

Twist the colourful panels to match and hear the sound or tune. Animal sounds or nursery rhymes (batteries included).
Y 7019



$8.25 ea

Musical Play Mat

Great fun for toddlers! Make animal sounds by crawling, walking or dancing! With 4 animal sounds, 8-programmed songs and wipe clean vinyl. Uses 3 x AA batteries (not included).
Y 7015

$21.50

Deluxe Koolshades Electronic Keyboard

Fantastic quality and sound, electronic keyboard. Featuring 3 octaves, 8 rhythm patterns, 8 orchestrations, 4 percussion, cymbals, bass, snare, high hat and 4 animal sounds. Uses 4 x AA batteries (not included).
Y 6927

$29.85

Electronic Keyboard with Sing-a-long Microphone

This keyboard has eight programmable rhythms, four percussion sound pads, four electronic animal sounds, six pre-recorded demo tunes and two-note polyphonic play. Comes with sing-a-long microphone! Uses 4 x AA batteries (not included).
Y 6928

$33.25

Kids Mini Keyboard

Features pre-programmed popular tunes, volume control and demo melody. Uses 4 x AA batteries (not included).
Y 7002

$14.50

Grand Piano with Magic Light

Follow the magic light keys to play tunes. Features sing-a-long microphone and 32-key flashing keyboard. Uses 4 x AA batteries (not included).
Y 7045

NEW FOR '99

$51.90

Kids Musical Guitar

With 13 electronic keys, 3 programmable rhythms and a pre-programmed melody! Includes hands-free play headset, sing-a-long microphone and shoulder strap. Uses 4 x AA batteries (not included).
Y 7025

$19.50

"Slammer Jammer" Guitar

15 guitar solo demos, 15 built-in rhythms, 4 built-in guitar effects, 14-step tempo, swing bar effect and more. Uses 4 x AA batteries (not included).
Y 7023

NEW FOR '99

$34.75

Rock 'n' Roll Stage Show for Kids!

Includes guitar with electronic speaker box, shoulder strap, microphone and adjustable stand. Colour and decals may vary from store to store. Uses 4 x C batteries (not included).
Y 7006

$59.95

Electronic Tuneable Guitar

Sounds just like a real guitar! This full-sized electronic guitar is designed especially for kids, with carry strap and microphone. Colour and decals may vary from store to store. Uses 4 x C batteries (not included).
Y 7007

$49.95

Welcome to the KIDS' ZONE

Keyboard Wizard

A typing tutor. Learn to type and understand the keyboard before moving on to a computer. Easy-to-read, 10 character LED screen, includes a typing lessons course book. Features many built-in typing activities. Uses 4 x AA batteries (not included).
Y 7078

VTECH

$129

'Little Genius PC'

Laptop Learning Fun

The Little Genius PC is an electronic learning aid that suits children 4 years and up. Has 20 educational games and learning activities. Portable and easy-to-use, it has the QWERTY keyboard, a calculator and 2 line LED display. Uses 4 x AA batteries (not included).
Y 7271

$59.95

'Game Child' Hand-Held Games

Choose from our selection of exciting action, single screen games at this great low price.
Y 7797

$10.50 ea

'Junior Computer Plus Learning Aid'

Early school learning

This talking laptop learning aid is a perfect introduction to the high tech world for your child. With large LCD graphics, 26 multi level multi player activities, playful sound effects, raised QWERTY keyboard, auto shut-off, 3 skill levels, suits children 5 years and up. Uses 4 x AA batteries (not included).
Y 7299

$99.95

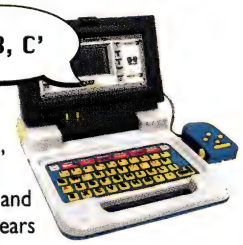
Hand-Held Game 'Card Boy'

This keyring style, mini LCD 'Card Boy' features built-in games such as the 'brick game'. Batteries included.
Y 7798

$9.85 ea

'Comquest Junior Plus' Electronic Learning Aid

Friendly voice talks to children as they play. 26 built-in multi level games, 3 skill levels, 1600 pixel dot matrix LED display, QWERTY keyboard, built-in mouse and a volume/contrast control. Introduces computer learning, develops reading and number skills. This learning aid suits children 6 years and up. Uses 4 x AA batteries (not included).
Y 7297

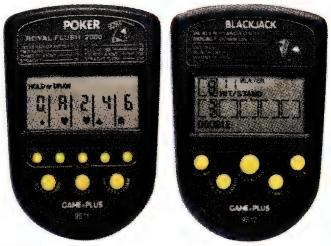


$139

Casino Type Hand-Held Games

Realistic casino type action games with automatic scoring, ideal for travel. 2 great games: Poker or Blackjack. Uses A76 or equivalent battery (S 3061).

Poker Y 7829
Blackjack Y 7830



$11.85 ea

Electronic Talking 'Comquest PC' Learning Aid

Great as an introduction to computers for children aged 7 and up. Will full-stroke QWERTY keyboard, sleek laptop design and dot/matrix LCD display. 22 multi level games and activities. Volume and contrast controls and 3040 pixel dot matrix LED display. Uses 4 x C batteries (not included).
Y 7285

$169

'Classic Golf' Hand-Held Game

Practice your golf game both on and off the green. This action-packed electronic game has 2 courses to select from, a double LCD screen and is battery operated.
Y 7799

$38.75

Radio-Controlled 'Galaxy Buggy'

Three-function, 27.145mHz radio-controlled "Galaxy Challenger" buggy. Goes forward, turns left and reverses. Fully assembled with spiked tyres. Uses 4 x 'AA' batteries plus 1 x 9 volt battery (not included).

Y 2425 **$19.75**

Radio-Controlled Full Function Buggy

Seven-function, 27.145mHz frequency radio-controlled buggy. Moves forward, turns left and right and reverses straight, left or right and stops. Uses 4 x 'AA' batteries and 1 x 9 volt battery (not included).

Y 2429 **$31.50**

Radio Control 4WD 'Super Blitzer'

This fantastic 4WD is great for kids! Full function with 2 speed, 27.145 MHz frequency, a differential gearbox and track adjustment. Uses 5 x 'AA' batteries and 1x9 volt battery (not included).

Y. 2863 **$49.80**

Radio-Control 4WD Black Monster

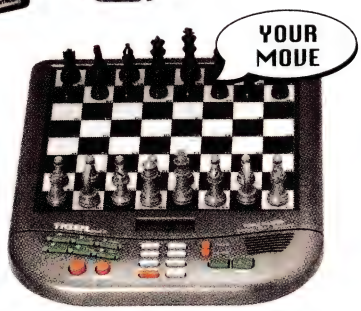
Full functioning radio-controlled pick-up truck features a working winch, real engine sounds and working lights. With high and low speed selector 4-wheel drive and rubber tyres. Uses 8 x 'AA' batteries and 1 x 9 volt battery (not included).

Y 2864 **$89**

Talking Voice Master Chess Set

8-bit single chip processor, RAM size 256 x 8, 4MHZ frequency features an interactive voice teaching feature. Uses 4 x 'AA' batteries (not included).

Y 7082 **$95**

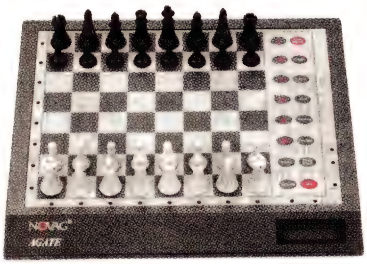


'Agate Plus' Chess Set

For novice to experienced players, this elegant tabletop chess set features a strong 16K program with large LCD screen, teach mode function. Uses 6 x 'AA' batteries (not included).

Y 7092

NOVAG® **$135**



'Aquamarine' Computerised Chess Set

A treat for chess champs!

This superb set with its 16 levels of play will suit every player from beginner to budding grand master. Uses 6 x 'AA' batteries (not included). **$95**

Y 7089

NOVAG®

'Amethyst Plus' Travel Chess Set

Perfect travel companion, fully portable. Popular peg style sensor, easy-to-read LCD screen. Uses 4 x 'AAA' batteries (not included).

Y 7091

NOVAG® **$69.95**

Long-Range Walkie-Talkie

Voice activated!

Provides up to 300m maximum range (line of sight). Operating on a high 55MHz frequency for reduced interference and noise, this durable walkie-talkie comes with belt clip and ear piece/tie clasp microphone for selectable hands-free voice-activated transmissions. No licence required. Requires 9V battery per unit.

D 1095

digitor **$69.95 ea**

Quality FM Walkie-Talkies

Kids will love these quality walkie-talkies!

With a long 200m range outdoors, operation on the 27MHz band, and FM transmission for superb audio quality, these walkie-talkies require no licence and use a telescopic antenna for easy storage. Requires 9V battery per unit.

D 1090

digitor **$69.95 pr**

Economy Quartz Stopwatch

With easy-to-read LCD display, split/lap times, regular watch function. Comes with handy nylon lanyard. Great for time related activities.
Y 1051

$10.95

Quality Digital Stopwatch

With 24-hour stopwatch function, 1/100 second readout and split/lap time, this rugged stopwatch is water-resistant and comes with a nylon lanyard.
Y 1050

$26.50

Analogue Talking Alarm Clock

Attractive analogue dial with voice time announcement and alarm function, hourly time report. Uses 2 x 'AA' batteries (not included).
Y 5303

NEW FOR '99

$18.35

10-Lap Memory Stopwatch

Features 10-lap memory, 24 hour stopwatch function, 1/100 second readout and split/lap time, stopwatch is water-resistant and comes with nylon lanyard. Ideal for track & field and swimming activities.
Y 1290

$29.80

NEW FOR '99

Ergonomic Style Stopwatch

Comes in assorted colours with daily alarm and hourly chime, 1/100 second readout, 12/24 hour clock function and requires a lithium battery included.
Y 1276

$15.65

Talking Digital Watch

Hourly voice announcement or whenever you push the button. Style may vary from store to store.
Y 1149

$19.50

Talking Pyramid Clock

Voice announcement on the hour, or whenever the button is pushed. Features both 12 and 24-hour formats. Requires 3 x 'AA' batteries not included.
Y 1008

$19.85

Copal Quartz Wall Clock

Featuring precision quartz time, this stylish clock is ideal for office or kitchen with large format and easy-to-read numbers. Uses 1 x 'AA' battery not included.
Y 1046

$21.50

Travel Clocks

Twin Bell Quartz Clock

Analogue, old-fashioned style clock face with luminous hands and loud alarm. Operates on 1x'C' battery not included.
Y 2227

$19.95

LCD Display Travel Clock

LCD screen designed to resemble a clock with hands. Includes handy night light, folding stand and battery.
Y 1043

$16.50

Reversible Backward Wall Clock

It's different! Bemuse and baffle friends, family or colleagues with this unusual timepiece. Uses 1 x 'AA' battery not included.
Y 2198

$21.50

Large Digital Clock with Backlight

Electronic clock with green backlight, jumbo LCD display, time and calendar readout. Uses A76 (S 3061) batteries included.
Y 1205

$10.75

Snooze Alarm Travel Clock

Large digital LED readout features handy backlight, 12 or 24-hour clock format and a loud 1-minute snooze alarm. Uses 1 x 'AAA' battery not included.
Y 2240

$21.50

Large Digital Wall Clock

Jumbo digital display with time, month, day, date and thermometer, 12 or 24 hour clock mode. Celsius/ Fahrenheit temperature selectable modes. Requires 2 x 'AAA' batteries not included.
Y 2199

NEW FOR '99

$78.45

Luminator Backlight Clock

Big, LCD display, PM & alarm 'ON' indicators and selectable 12 or 24 hour time. Uses 2 x 'AA' batteries not included.
Y 2242

$22.75

World Time Travel Clock

Programmed with the time zones of 20 major cities, this travel clock features 12/24-hour clock mode, 4 minute snooze function and flip out stand. Uses 357/G13 button cell battery (S 3293).
Y 1040

$28.60

Wireless Door Chime

Can be mounted in minutes without messy wiring. The bell (receiver) unit can be fixed to a wall, clipped to a belt or put on shelf. Receiver uses 2 x 'AA' batteries, transmitter uses 2 x 'AAA' batteries not included.

Y 8405

$26.50

Digital Tyre Pressure Gauge

Fast, efficient and highly accurate! Gives PSI reading in a large, easy-to-read display. Includes lithium battery.

Y 5034

$27.90

Digital Stem Thermometer

Laboratory-standard thermometer features moveable head switch and LCD display giving 3-second updates. With a measurement range of -50°C to 150°C (-58°F-302°F) and more than 5000 hours of battery life, this thermometer is suitable for home, educational, scientific and hobby use.

Y 5031

$21.50

Thermometer Hygrometer Clock

This thermometer hygrometer clock is ideal for greenhouses, offices or homes. It reads indoor/outdoor temperatures and humidity. Its compact, slim design incorporates 12/24-hour clock function, min/max temperatures and relative humidity memory, outdoor sensor with a 3-meter weatherproof sensor wire. Uses 1 x 'AAA' battery included.

Y 5189

$51.45

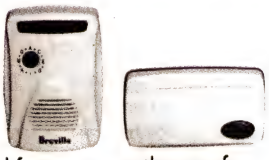
Dual Aquarium Thermometer

Provide your tropical fish with an optimum environment. This aquarium thermometer is suitable for fresh or salt-water tanks, and will activate an alarm when water temperature falls to harmful levels. Provides both room and water temperatures. Uses 1 x 'AAA' alkaline battery included.

Y 5033

$26.50

Breville Wireless Door Chime



This wireless door chime plugs into any powerpoint and features a weatherproof push button and is code dial selectable. Also features a light flashing signal, ideal for the hearing impaired. 12V battery included.

Y 8452

$43.95

Keychain Tyre Pressure Gauge

This digital electronic, tyre pressure gauge with PSI reading, is ideal for checking tyres to reduce wear on the tyres and increase efficiency. With built-in lithium battery and PSI reading.

Y 5036

$18.80

Dual Temperature Alert Thermometer

This thermometer monitors temperatures indoors and outdoors. It has 2 large, easy-to-read screens and a control alert when temperatures become too high or low. Uses 1 x 'AAA' alkaline battery.

Y 5011

$29.90

Slimline Indoor/Outdoor Thermometer

Monitor the temperature in two places at once! Great for indoor/outdoor temperature readings. Compact design with easy-to-read LCD and battery.

Y 5007

$27.50

Clock with Indoor/Outdoor Thermometer

This electronic thermometer has a blue glow backlight for night viewing, easy-to-read jumbo digital display, and precision quartz accuracy. Uses (S 3061) A76 or L44 size batteries included.

Y 5037

$25.50

Digital Kitchen Scales

This slimline design converts between metric and imperial measurements and features an auto shut off. Uses 4 x 'AA' batteries not included.

Y 5021

$49.95

Digital Scale

This compact design features a large digital readout with 1 gram resolution and 2 kilo capacity. Its easy-to-clean surface means minimal fuss. Perfect for around the home.

ARLEC

Y 5102

$75

Compact Timer/Clock

Great for timing cooking, phone calls, medication, schedules etc. This compact 24-hour timer counts up and down and includes a full-function digital clock. Uses 1 x 'AA' battery included.

Y 1023

$19.85

Talking Countdown Timer

A voice tells you how much time is left during countdown. 3-in-1 functions. Countdown timer, count up timer plus alarm sounds. Desktop standing or belt clip. Uses CR2032 (S 3331) lithium battery included.

Y 5187

$21.50

Dual Memory Digital Timer

This large display timer counts up and down. Includes timer memory recall and folding stand. Uses G13/357 (S 3293) battery not included.

Y 5188

$24.50

Microwave Oven Leakage Detector

Allows you to check the seam around the oven door and leakage of harmful radiation. It's easy-to-use.

Y 4100

$24.85

Ultrasonic Dog Trainer/Chaser

Ideal for training your dog and may deter dangerous dogs, emits a high-frequency sound. Push button operated with an effective range of 6m. Uses a 9V battery not included.
Y 2310
$23.50

Echo Whistle Keyring

You'll never lose your keys again! Your keys are only ever a whistle away.
Y 1070
$2.20

Whisper 2000 Personal Sound Amplifier

This amazing, personal sound amplifier will make life far more pleasant for the hearing impaired. No more having to turn up the TV to extreme volumes or missing out on crucial speech and sound.
Y 2000
$10.50

Speak E-Z Motorbike 2-Way Communication

For uninterrupted 2-way communication between motorbike and partner riders. With hands-free operation and volume controls, it is easy-to-fit to most helmets. Uses 4 x 'AAA' batteries not included.
Y 2306
$27.45

Ultrasonic Outdoor Dog/Cat Control

Protect your garden or lawn from unwanted cats and dogs by using this simple ultrasonic control device. Emits a high-frequency sound when infra-red detects animal intrusion. Monitors up to 9m and uses 1 x 9V battery not included.
Y 2311
NEW FOR '99
$68.85

Deodoriser Car Lighter Dispenser

Operating off most car cigarette lighters, this unit eliminates unwanted odour while your car engine is running. Includes 6 replaceable cartridges.
Y 9040
$6.25

Pencil Sharpener

Battery operated auto on/off function, this handy sharpener features rugged, solid, steel helical cutting heads. Uses 4 x 'AA' batteries not included.
Y 1201
$14.85

3-In-1 Bicycle Computer

Water resistant with LCD and 24 hour alarm clock. Features include current, maximum and average speeds, trip distance and time and many more features. Uses CR2032 lithium battery (S3330) not included.
Y 4116
$29.85

Ultrasonic Pest Control

The environmentaly safe way to get rid of pests. Ideal for use against cockroaches, mice and other rodents. Simply plug into a wall socket and let the ultrasonic & electromagnetic waves rid those unwanted pests.
Y 2312
NEW FOR '99
$79

Nose and Ear Trimmer/Razor Gift Set

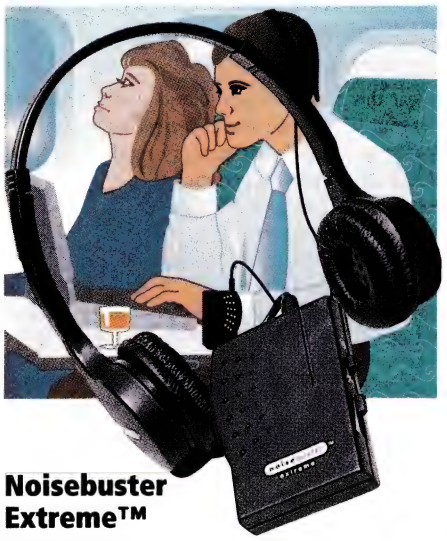
Trim unwanted hair from nose and ears, and get a massage while shaving from the vibrating razor. Both the trimmer and shaver use 1 x 'AA' battery.
Y 9112
$9.80

Plant Mate Hygrometer

The perfect companion for your pot plants. Simply insert in soil to the root level to monitor moisture. Bird whistles when plants need watering.
Y 2910
$14.40

Safety Flasher Light

Ideal for bike riders and joggers it comes with a velcro strap.
Y 1061
$4.80



Noisebuster Extreme™ Headsets

- Personal noise reduction headsets
- Compact and lightweight
- Cuts back irritating engine and low frequency noises
- Ideal for smooth quiet flights
- Complete with all cables, plugs for connections for portable audio equipment and inflight entertainment systems

Y 1225 **$99.50**

Korjo Travel Water Immersion Heater

Enjoy hot water quickly and easily with this handy travel accessory.

Y 9021 KORJO **$19.85**

Travel Steam and Dry Iron

With dual voltage for worldwide use, fold-down handle and convenient travel pouch.

Y 9020

KORJO **$47.75**

Korjo Travel Jug

Ideal for travellers. Makes coffee or tea and even purifies water. Boils two cups of water, has a steam sensor cut off, compact and lightweight, suitable for international use.

Y 9023 KORJO **$47.85**

Compact Men's Travel Shaver

A spare shaver for travel, work or the car. Compact, easy-to-use and battery operated, it comes with a handy brush and quality blades. Uses 2 x 'A' batteries (not included).

Y 8949 **$17.60**

Korjo Travel Hairdryer

Lightweight and folds into a compact size for easy packing. With 2 heat/speed settings and dual voltage for worldwide use. White only.

Y 9022 KORJO **$25.85**

Portable Travel Fan

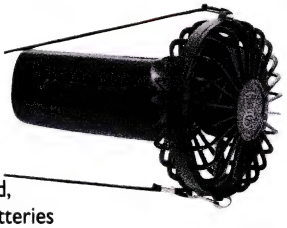
Battery operated with an on/off switch and suction cup for easy mounting, this portable fan provides powerful airflow to keep you cool. Uses 1 x 'D' battery (not included).

Y 8519 **$8.95**

12 Volt DC Mini Fan

Ideal for cars, boats, trucks or caravans, this 12V oscillating fan has a strong suction cup for easy installation.

Y 8524 **$9.50**



Personal Mini Fan

Features lanyard to hang around the neck. Battery operated, uses 2 x 'AA' batteries (not included).

Y 8518 **$5.50**

Hair Clipper Set

Great for low cost home haircuts, this set includes 4 trimmer guides, a cleaning brush, 7-inch barber comb and blade protective cap. 240 volts plugs directly into the power point.

Y 9038 **$29.75**

Rechargeable Home Hair Clipper Set

You'll save a packet on haircuts once you start styling at home with these take-anywhere clippers. Trimming attachment ensures a neat job every time.

Y 8995 **$26.85**

Multi Reverse Adaptor MR02

Converts USA, Japan, Europe, Great Britain and many other mains plugs to the Australian system. Earthed for safety. Does not convert voltage.

M 7303 **$11.70**

Korjo Travel Adaptor – 3 pack

3 pack containing M 7312(Aussie to UK), M 7314 (Aussie to Europe) and M 7316 (Aussie to USA). These adaptors do not covert voltage.

NEW FOR '99

M 7310 **$19.95**

Australian to UK

Converts Australian mains plug to fit UK, Ireland, Singapore, Hong Kong, parts of the Middle East and Africa. Does not convert voltage.

M 7312 **$8.95**

Australian to Europe

Converts Australian mains plug to fit European style. Also fits Bali, Noumea, Tahiti, parts of Middle East, Asia and South America. Does not convert voltage.

M 7314 **$8.95**

Australian to Japan

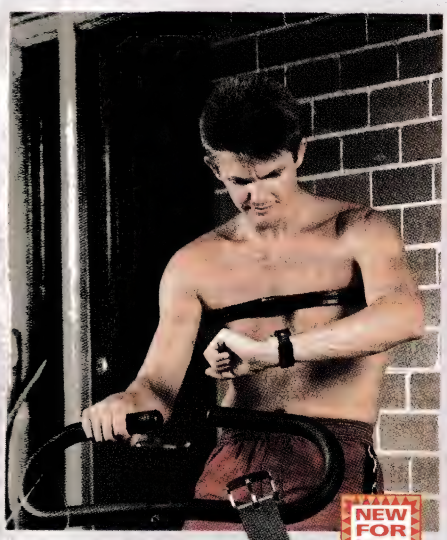
Converts Australian mains plug to suits Japan, Mexico, Taiwan and parts of South America. Does not convert voltage.

M 7315 **$8.95**

Australian to USA

Converts Australian mains plug to suit USA and Canadian style plugs. Does not convert voltage.

M 7316 **$8.95**



NEW FOR '99

Heart Rate Pulse Monitor

Help your health and fitness. A great way to train and measure your own state of health. This unit features wireless transmission from the heart to a wrist watch unit with an LCD digital display. Features high and low limits for heart rate programmable (training zone), heart rate memory and recall, stopwatch function, averaged consumed calories setting, heart rate upper and lower alarm memory for time inside and outside the training zones. Also features clock with hours, minutes and seconds (12/24 hr selectable), alarm El backlight, date display: day, month and is 10 metres water-resistant. Includes bike mount. Batteries included (uses CR2032 /S3331 lithium battery in monitor and transmitter).

Y 5078 **$189**

Digital Pedometer

A super-small digital calorie meter and pedometer with belt-clip. A micro-computer calculates calorie consumption according to the intensity of the exercise, so you can work out just the right amount of exercise you need to keep your weight down. Comes with battery.

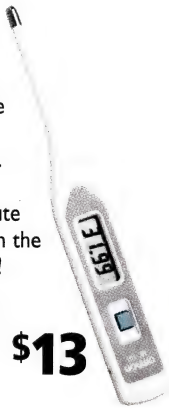
Y 5002 **$39.90**

Electronic Acupuncture

A safe, hi-tech replacement for acupuncture without the use of needles. Using electronic signals, this remarkable device both searches for and stimulates acupuncture points. Compact, light-weight and easy to operate, this unit features useful sound and light indicators and is powered by two lithium batteries included.

Y 5073 **$75**

Digital Thermometer



This easy-to-use digital thermometer has dependable accuracy with variations of only +/-0.1 degrees C (+/-0.2 degrees F). Take your temperature in just one minute with a buzzer indicating when the thermometers ready to read! Includes battery.

Y 5042

OMRON **$13**

Digital Wrist Blood Pressure Meter

Wear this easy-operation blood pressure meter on your wrist while you take a reading. It inflates manually, has memory recall, automatic power off, accuracy to within +/-3 mmHg or 2% which ever is greater (pressure), +/-5% pulse, six-digit display. Lithium batteries included.

Y 5506

sein **$95**

Blood Pressure Monitor

Check your blood pressure on a regular basis in the privacy of your home with this compact and handy Blood Pressure Monitor. With oscillometric method auto inflation, it is easy to operate. The monitor gives accurate blood pressure recordings, and the monitor has many features including memory function, pre-set function, auto power off. Uses 1 x 'AA' alkaline battery not included.

Y 5505 **$115**

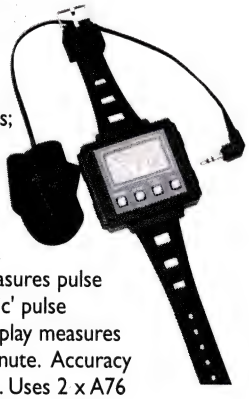
Automatic Blood-Pressure Monitor

Allows simple, convenient and accurate measurements of blood-pressure and pulse to be taken in the privacy of your home. The cuff automatically inflates for extra convenience and has velcro strips for easy fastening. It offers accuracy to +/-3mm Hg and 5% of pulse reading and comes complete with soft carry-case, batteries and full instructions. Model M4C.

Y 5096

OMRON **$179**

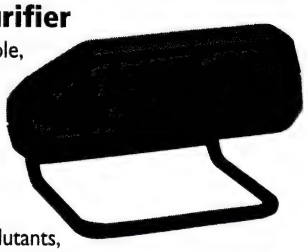
Wrist-Watch Pulse Monitor



With seven functions; pulse meter, upper limit pulse alarm, lower limit pulse alarm, pulse rate recovery, stopwatch, clock and alarm. Measures pulse using 'opto-electronic' pulse detection. Digital display measures 15-250 beats per minute. Accuracy + or - 5% of reading. Uses 2 x A76 batteries or equivalent. (S 3061)

Y 5079 **$139**

Negative Ion Generator and AirPurifier



For many people, a negative ion generator is the healthy solution to rooms choked with cigarette smoke and pollutants, or robbed of negative ions by air conditioners. For the home or office. Mains powered.

Y 9000

AUSTRALIAN MADE Aironic **$79.95**

Thinner Bathroom Scale

Highly accurate (uses a strain gauge instead of springs) electronic scales. With auto zero set and large, easy-to-read LCD display. Comes with lithium batteries.

Y 5027 **$79**

Electronic Toothbrush Set

Better for your gums. With four detachable brushes. Requires 2 x 'C' batteries not included.

Y 8991 **$5.50**

Additional 4 extra brushes
Y 8992 **$1.50**

Penlight Torch
Just slip it in your pocket!
Y 1127 **$1.85**

Eveready Squeeze Light
Disposable torch.
Y 1104 EVEREADY **$2.85**

Keylite
With this handy keyring light, you'll have no trouble finding keyholds in the dark!
Y 1059 **$3.75**

Rubber Torches
Great for the outdoors!
Uses 2 x 'AA' batteries.
Y 2139 **$5.50**

Flashlight Kids Fun Light
This kids torch comes in a range of lovable animal style heads. It has a strong beam and is easy to hold. Just squeeze the trigger and the mouth opens! Uses 2 x 'AA' batteries (included for demonstration purposes only).
Y 2149 **$8.50**

Energizer Microlight Torch
It's small but bright enough for most needs! Water and corrosion resistant. Shockproof.
Y 2175 Energizer "NO BATTERY LASTS LONGER" **$9.10**

Rechargeable Torch Keyring
This light comes complete with keyring and plugs straight into your car cigarette lighter to recharge.
Y 1105 **$8.95**

Energizer Ultra Slim 'AAAA' Torch
Tiny but with no compromise on lighting power! Features high-intensity bulb and shatterproof lens. 'AAAA' batteries included.
Y 2176 Energizer "NO BATTERY LASTS LONGER" **$10.90**

Roughneck 'AA' Torch
With adjustable beam, it has both narrow spotlight and wide angle floodlight. Includes 2 x 'AA' batteries.
Y 1124 RAYOVAC **$13.75**

Roughneck 2 x 'D' Torch
Industrial-strength and water-resistant. With a bright Krypton globe.
Y 1129 RAYOVAC **$13.85**

My-Lite Flashlight
Water-resistant and shockproof. Complete with spare bulb.
Y 1103 ARLEC **$14.15**

Compact Pocket Flashlight.
Y 1110 **$14.10**

Dolphin Lantern Torch
This waterproof floating lantern has a Krypton Globe, a dial-a-beam selector from wide to spot light. Uses a 6-volt battery (not included).
Y 2148 EVEREADY **$15.95**

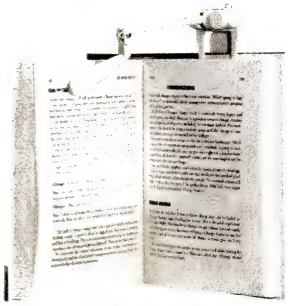
Heavy Duty Tough Flashlight
A solid quality flashlight for trades-men, security, campers or anyone who needs a dependable torch. 3 x 'D' size batteries.
Y 1091 **$23.75**

Arlec Rechargeable Smart Lite
Enjoy the versatility of this rechargeable torch. Ideal for all jobs.
Y 1139 ARLEC **$28.25**

Rayovac Small Swivel Lite Torch
This small torch has a 180° pivoting head and a 7-position head. It adapts to any situation and is excellent for hands free work.
Y 2154 **$14.25**

RAYOVAC

Rayovac Large Swivel Lite Torch
For hands-free working. Features non-roll design, 180° pivoting head, and hanging clip.
Y 1141 RAYOVAC **$20.75**



Itty Bitty Book Light

Enjoy the time between destinations, whether in a car, plane, or train! Specially designed for travel, it's light-weight and battery-powered and comes in a sturdy self-contained carrying case. Uses 4 x 'C' alkaline batteries not included.

S 4032 **$29.95**

Replacement globes 2 pack S 4033 **$8.75**

Magnifying Work Lamp

Just the thing for working on PCBs, jewellery, models or anything small. This sturdy 'Luxo' worklamp has a magnifying glass to give you a close look at what's going on. With a very heavy-duty base, full radial movement and spring-loaded adjustable arms so you can get just the right working angle. 240V operated. A must for the workshop/craftroom.

S 4001 LUXO™ **$99**

Replacement globes S 3968 **$4.50 each**

Halogen Globes

Linear halogen, 150 watt.

150W S 3981 **$6.50 ea**

500 watt S 8465 **$8.25 ea**

Pilot Globes

PAR 38 Coloured and Clear Parafloods

Clear 80W ES	S 8440	**$7.25 ea**
Clear 120W ES	S 8441	

PHILIPS

Yellow 80W ES	S 8442	
Green 80W ES	S 8443	
Blue 80W ES	S 8444	**$9.95 ea**
Red 80W ES	S 8445	

PHILIPS

Fridge Globes

Clear 15W SBC	S 8376	
Clear 15W BC	S 8374	**$1.75 ea**
Clear 15W ES	S 8377	

PHILIPS

Oven Globes

Clear 25W ES S 8371 **$1.85**

PHILIPS

Flood Lamps

Coloured Reflector Globes

Ideal for display, party, warning lights, etc. R95 Model, Edison Screw base. 100 watt.

Yellow	S 3851	
Red	S 3853	
Blue	S 3855	**$9.95 ea**
Green	S 3857	

PAR 38 Coloured & Clear Parafloods

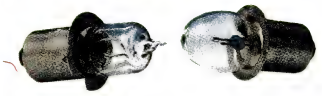
Clear 80W ES	S 8440	
Clear 120W ES	S 8441	**$7.25 ea**

Black Light

Ultra violet incandescent globe, gives real 'disco' atmosphere. 75W BC Globe.

S 3900 **$10.95 ea**

Torch Globes



Heavy-Duty Torch Globes

Standard flange fit heavy duty torch globes. In blister pack of two.

4.8V @ 0.7A	S 3965
2.4V @ 0.5A	S 3967
3.6V @ 0.5A	S 3966
6.0V @ 0.5A	S 3984

EVEREADY. **$2.55 ea**

Heavy-Duty Screw-Type Torch Globes

Heavy duty screw-type torch globes in handy packs of two.

6.2V @ 0.3A	S 3946
2.5V @ 0.3A	S 3947
2.3V @ 0.27A	S 3948

EVEREADY. **$2.55 ea**

Halogen Torch Globes

Halogen Globes operate at higher temperatures and should only be used in torches designed for their use!

2.8V @ 0.85A	S 3950
5.2V @ 1.0A	S 3960
4.0A @ 0.85A	S 3955

EVEREADY. **$11.35 ea**

Krypton Globes

Higher performance, extra bright Krypton globes to suit most torches, lanterns, etc. Standard flange fit.

2.2V @ 0.52A	S 3983
2.4V @ 0.47A	S 3982
2.4V @ 0.7A	S 3961
3.6V @ 0.75A	S 3962

EVEREADY. **$2.10 ea**

Mini Torch Globes

Globe to suit Arlec Mylite Torch in packs of 2.

S 3969 **$4**

1.2V @ 0.3A packs of 2	S 3985
2.6V @ 0.3A packs of 2	S 3986

EVEREADY. **$4.25 ea**

Boat or Caravan Omni Directional TV Antenna

Use this high performance UHF/VHF TV 360° omni directional antenna on your boat or caravan. Includes a built-in amplifier, a UHF increment & VHF increment dB gain control plus 12V DC injector/power supply. Vertical or horizontal mounting options with a 45° angle.

L 4078

$69.95

UHF/VHF Caravan TV Antenna

Take your TV with you on the road!

Now you need never be without top quality TV reception in your mobile home. This reliable multi-function TV antenna can be mounted vertically or horizontally for either UHF reception, VHF reception or both. Easy to install and durable. Suits any caravan.

L 4054

$66.95

Indoor TV Antenna with Built-in Amplifier

Great for UHF or VHF bands with a non-scratch, non-slip base, soft granite look and rabbit ears with variable tilting action. Includes adjustable gain control and power adaptor 12V DC. May not perform as well as an outdoor TV antenna in difficult reception areas.

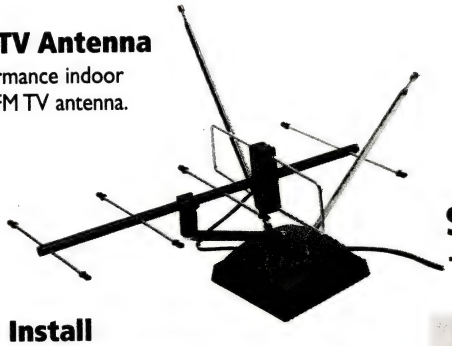
L 4016

$49.75

Indoor TV Antenna

High performance indoor UHF/VHF/FM TV antenna.

L 4017



$19.75

How to Install Your Own TV/FM Antenna

By Dick Smith Electronics

Fed up with getting ripped-off by unscrupulous installers and salespeople? This publication shows you how to save money by doing it yourself.

B 6010

95¢

Spiral TV/FM Antenna

Ideal for VHF channels 2-11 in good reception areas or as an FM radio antenna for your tuner. Suitable for 300 ohm ribbon cable connection.

L 4010

$8.50

Replacement Rabbit Ears TV Antenna

Damaged your rabbit ears antenna? Here's the perfect low-cost replacement! Simply plug these ears into your old base. Picks up VHF channels 2-11 in good reception areas.

L 4655

$10.90

Rabbit Ears TV Antenna

A reliable, economical alternative to an outdoor antenna. Ideal for VHF channels 2-11 in good reception areas. Comes with coax plug connection.

L 4015

$17.95

High Quality Deluxe Rabbit Ears TV Antenna

A quality VHF antenna for good reception areas or where outdoor systems are inappropriate. The antenna rotates 180° for easy adjustment.

L 4011

$21.90

Space Age Style UHF/VHF/FM Antenna

Best suited for strong reception areas (metropolitan areas), this indoor antenna has an adjustable UHF dish and tuning knob that's also good for VHF and FM. Come with coax cable and plug.

L 4005

$24.60

Indoor FM Radio Antenna

Great as an FM antenna for your tuner or even as a VHF TV antenna in prime reception areas. Simply find the best reception position, and stick it up with tacks or adhesive.

L 4060

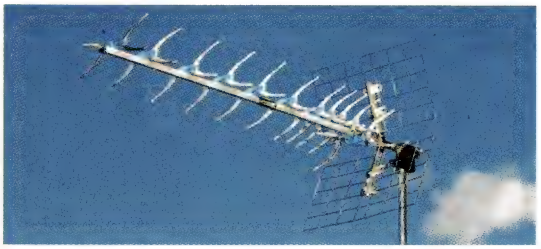
$4.75

23-Element UHF TV Antenna

An up-to-date 23-element design, it receives all UHF channels from 28 to 69. Antenna can be tilted where necessary and can be easily mounted on any standard antenna mast. Includes balun for coax connection.

L 4086

$69.50



43-Element UHF TV Antenna

With 43 elements, this antenna is best suited to medium reception areas. It's tuned for reception of channels 28 – 69 and can be mounted vertically or horizontally. Comes complete with balun for coax connection.

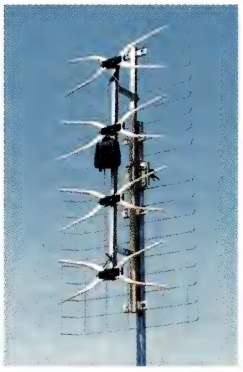
L 4084

$79.95

UHF Phased Array TV Antenna High Performance

Ideal for poor signal areas, this heavy-duty high-performance antenna provides high gain over all UHF channels 28-69 (bank 4&5). Includes balun for connection to coax cable and tilt bracket for easy mounting.

L 4087



$69.95

91 Element For Deep Fringe Areas!

High-quality antenna for superior deep fringe area reception on all UHF channels 28-69. Suitable for mounting vertically or horizontally.

L 4088

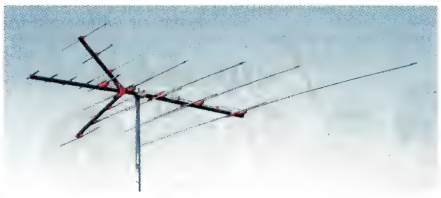
$129

Combination UHF/VHF/FM Antennas

Feature corrosion-resistant construction for long life. Ideal TV antenna for metropolitan and most country areas. Vertical or horizontal mounting.

L 4000 – VHF channels 2-11/UHF 28-69
L 4001 – VHF channels 2-11/UHF 28-35

$59.95



Combination UHF/VHF TV Antenna

Ideal for good to medium signal areas with extra elements for higher gain on lower channels UHF 28-69, VHF 2-11. Corner reflectors also improve UHF performance.

L 4021

$129

Combination UHF/VHF TV Antenna

Ideal For Fringe Areas

High-quality, high-gain antenna receives all UHF channels and VHF channels. Can be vertically or horizontally mounted.

L 4051

$145

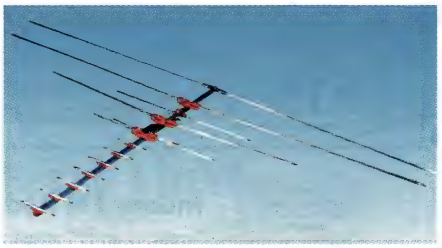
Yagi-Style UHF TV Antenna

Suits Channels 28-69

If you live in a medium to good TV reception area, this is the UHF antenna you need. With two reflectors for improved reception. Can mount horizontally or vertically. Pick up SBS (where available)!

L 4079

$59.70

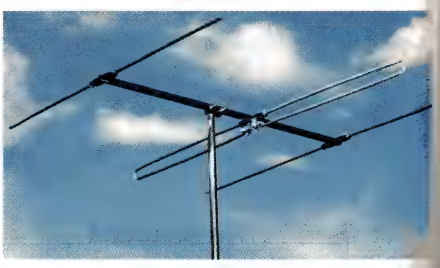


All Round Combination VHF/UHF/FM TV Antenna

This antenna is ideal for good to medium signal areas. It includes a matching balun, VHF channels 2 to 11, UHF channels 28 to 69.

L 4019

$89.50



Outdoor FM Radio Antenna

Gives great FM radio reception in city and metropolitan areas and is built to last! It's easy to erect and has 300 ohm ribbon cable connections.

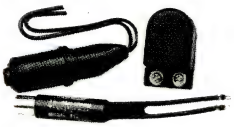
L 4064

$49.85

Antenna Splitters

Used when one antenna is connected to multiple TVs, videos, etc (can sometimes be used in reverse). All are designed for indoor use.

2-Way TV 75ohm Splitter/Coupler	L 4472	$7.50
2-Way Plug Type/Socket Splitter	L 4270	$5.50
2-Way Right Angle Splitter	L 4272	$5.50
2-Way TV 300ohm Splitter/Coupler	L 4218	$8.25
4-Way TV 75ohm Splitter/Coupler	L 4474	$8.50



Baluns

300ohm screw to 75ohm Plug Balun	L 4456	$3.75
Outdoor 300 to 75ohm Masthead Balun	L 4465	$5.95
Indoor 75ohm Socket 300ohm spade terminal balun	L 4454	$4.95

TV Fly Leads

6m coaxial cable with connection adaptor. Male/Male convert to Female/Male connection.
L 4268 **$9.95 ea**

Also available: 1.5m coaxial cable with plugs. L 4269 **$5.75 ea**

Masthead Diplexer

Housed in a weatherproof enclosure for masthead fixing with provision for 75 ohm connections. Can be used indoors or outdoors. L 4469 **$13.50**

Kingray UHF/VHF Diplexer

L 4208 **$19.95**

Inline FM Trap

Filter unit for strong FM signal interference which can create 'herringbone' pattern on TV receiver screen.
L 4478 **$7.50**

Variable Inline TV Attenuator

Reduces strong TV signal being transmitted. Variable control knob.
L 4482 **$12.95**

Games/Computer TV Switch

A flick of this switch and you can swap between watching TV and playing games.
L 4501 **$9.75**

2-Way 'F' Connector Splitter

Allows the connection of two devices to one antenna. Suits VHF, UHF & FM radio. 75 ohms. Ideal for cable connections.
L 4221 **$6.50**

RG59 'F' Connector

Suits RG59 coax cable. Pack of 4.
L 4225 **$6.50**

2.4m Masthead

Standard 25mm diameter mast pipe.
L 4156 **$15.95**

Vertical Stand-Off Masthead

Allows you to change the masthead for areas where standard antennas can't normally be used. Complete with saddle clamp.
L 4170 **$8.95**

Barge Board Mount	L 4150	$19.95
Chimney Mount Kit	L 4154	$32.95

TV Wall Mount

20cm Mount	L 4152	$10.85
60cm Mount	L 4153	$12.95
U Bolt and V Block Set	L 4165	$3.25

TV VHF/UHF Separator 75 Ohm/75Ohm

Provides two separate equal outputs from a single antenna input in situations where TV receivers have separate VHF/UHF antenna.
L 4480 **$7.95**

RG6 'F' Connector

Suits RG6 coax cable. Pack of 4.
L 4226 **$6.50**

TV Amps

An amplifier will not improve reception where there is a poor signal. It amplifies the signal at the antenna and maintains the signal quality, and integrity, where longer cable runs are required or multiple TVs are connected (via splitters) to one antenna.

2-Way TV/FM Splitter Amplifier

A great low-cost splitter indoor amplifier that's easy to install. Australian made, it features VHF/12dB & UHF 12dB gain and 2-way coaxial outlets. Compact in size, it's also ideal for multiple outlets.
L 4215 **$49.80**

2-Way Splitter TV Amplifier

Ideal for home viewers who want good reception when operating multiple TVs from a single antenna. For in line amplification of VHF/UHF TV channels. Includes power supply. For indoor use only.
L 4216 **$75**

UHF/VHF TV Masthead Amplifier

A quality masthead amplifier designed for VHF/FM/UHF channels. It provides high gain with extremely low noise level and comes with power supply and mast clamp. Variable gain for best results in differing signal strength areas. Includes power supply.
L 4205 **$87.50**

TV Masthead Amplifier

This Australian made Kingray UHF/VHF masthead amplifier, features gain control and comes with power supply.
L 4213 **$89.85**

Security-Door Entry Systems

Security Door Beam

This infra-red door beam is easy to install. Features alarm/chime/off mode, adjustable time for chime & siren, output for optional second buzzer. Includes door beam, siren/chime unit, 10m cable, power adaptor, beam reflector & mounting brackets. It has a range of 7m & is ideal for use on shop fronts, store rooms etc.

L 5900

$149

Security Door Chime

Ideal for use on shop doorways! Activates when someone walks past it. Range of around 5m. The door chime operates under normal indoor light conditions. Requires 2 x 'C' batteries (not supplied).

L 5043

$38.50

PIR Mini Alarm/Chime

Ideal for shop fronts and door entries, this pocket sized passive infra-red sensor alarm provides reliable detection as well as safety, security and convenience. Features 60° detection arc (8m horizontal x 3m vertical), exit delay, loud 90dB siren, auto-stop after 30 seconds & ding dong entry chime. Requires 1 x 9V battery (not supplied).

L 5035

$49.50

FRONT VIEW

SIDE VIEW

Security – Personal Alarms

Personal Body Alarm

Personal Body Alarm with pull pin activation. Features a loud siren, approximately 110dB. Requires 1 x 9V battery (not supplied).

L 5177

$14.95

NEW FOR '99

Bodyguard 3 Personal Alarm

Simply slip the wrist-strap on and put bodyguard in your purse. If the cord is pulled the powerful siren is triggered. Also features a handy key-light torch. Requires 2 x 'AAA' batteries (not supplied).

L 5154

$19.95

* *Limited stocks*

Novelty Personal Alarm Keyring

Great for the owner who doesn't want people to know their carrying an alarm device, looks just like a novelty keyring. Available in two styles, Rabbit and Crocodile. Requires an A23 12V alkaline battery (supplied).

L 5182

NEW FOR '99

$14.95

Sonicguard Personal Alarm

This powerful personal alarm with in-built torch is designed to blast its ultra loud 135dB sound not into your hand but out in front where it is most effective. Features a belt clip and an in-built torch to find your way in the dark. Requires 4 x 'AAA' batteries (not supplied).

L 5181

$19.95

Big Shock Personal Alarm

You'll feel so much safer with this alarm attached to your purse or brief case! If you ever feel threatened, simply pull the cord to sound an attention getting 110dB alarm. Requires 5 x LR44 batteries (supplied).

L 5172

$16.95

Key Alert Personal Alarm

Compact personal alarm with built-in flashlight, sturdy keyring and loud alarm. Requires an A23 12V battery (supplied).

L 5178

$22.50

Entry Alarm with Keypad

It has a user-programmable security code, programmable entry and exit delay time, reliable detection, built-in piezo siren at 110dB and ultra-low battery consumption. The alarm will sound once windows and doors are opened. Requires 3 x 'AA' batteries not supplied.

L 5067

$29.85

PIR Mini Alert Alarm/Chime

Operates as an alarm or chime! It monitors an 8m range in an 80° arc and comes with a wall mounting bracket. Requires 3 x 'AA' batteries not supplied.

L 5045

$34.95

Intruder PIR Alarm with Keypad

Designed for easy do-it-yourself installation. Movement automatically triggers this reliable alarm, sounding an ultra-loud 130dB siren. Monitors a 7m range in 60° arc. Features easy to program 4-digit personal code, automatic reset, 30 second exit delay, 10 second entry delay and a low battery indicator. Requires 4 x 'AA' batteries not supplied.

L 5061

$43.95

Mini PIR Alarm with Remote Control

Movement automatically triggers this reliable alarm, sounding an ultra-loud 130dB siren. Monitors a 7m range in 60° arc. Features infra-red remote control, automatic reset, 30 second exit delay, 10 second entry delay and a low battery indicator. Requires 4 x 'AA' batteries not supplied.

L 5062

$54.95

Additional Accessories

Remote control to suit mini PIR alarm (L 5062).

L 5063 **$14.95**

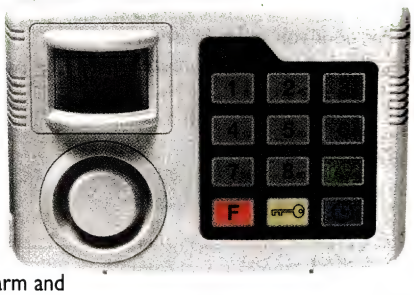
External 130dB Siren

An optional external siren that simply plugs into the L 5061 Intruder Alarm and the L 5062 Mini PIR Alarm. Supplied with 10m of cable. Features an anti-tamper device that will instantly sound the siren if the lead is broken to the main unit. High output 130dB siren and a low battery indicator. Requires 4 x 'AA' batteries not supplied.

L 5064

$19.95

PIR Alarm and Visitor Chime



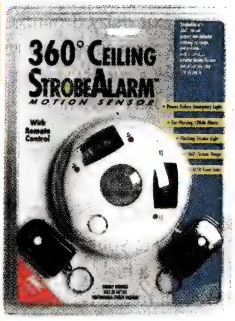
Reliable safety and convenience, DIY design, requires no wiring. Keypad access code control. Features a 10m range with an 89° detection angle, built-in powerful siren up to 120dB. Programmable PIN number. Choose between alarm and chime operation. Selectable exit, entry delay and alarm duration. Requires 3 x 'AA' batteries or a DC power adaptor not supplied.

L 5030

$59.95

Strobe Alarm 360° Ceiling Alarm

NEW FOR '99



Strobe Alarm's 360° sensor detects any intruder entering its range, and triggers a series of blinding strobe flashes and an ear-piercing 120dB siren. Features 2 remote controls programmable with custom codes (4 DIP switches). Requires 1 x 9V and 4 x 'C' size batteries or 9V power adaptor not supplied.

L 5034

$99

Strobe Alarm MK2

NEW FOR '99

Great for home, office or garage, designed for indoor use. Features a 120° sensor that detects any intruder. It includes a powerful flashing strobe light, loud 130dB siren, remote control, adjustable bracket and warning sticker. Requires 1 x 9V and 4 x 'AA' batteries or a DC power adaptor not supplied.

L 5033

$79.90

Additional Accessories

Extra remote control	L 5066	$19.95
Transmitter for siren/strobe	L 5036	$24.95*
Remote magnetic reed switch	L 5038	$29.95*
Outdoor/Indoor alarm	L 5037	$59.95*
Glass breakage sensor	L 5039	$21.95*

*EXCLUSIVE TO POWER HOUSE & direct link

Complete Strobe Alarm MK2

Easy-to-install. Totally wireless, expandable RF security system. Includes PIR motion sensor with 120dB siren, flashing strobe light and emergency light, RF indoor/outdoor alarm with 120dB siren and flashing strobe light, radio command RF transmitter that connects to the motion sensor and signals the RF indoor/outdoor alarm, RF magnetic door/window reed switch and RF glass breakage sensor that also signals the RF indoor/outdoor alarm. Supplied with two remote controls. Unit requires 4 x 9V, 8 x 'AA' and 1 x 12V alkaline batteries or optional DC power adaptor not supplied.

L 5032

NEW FOR '99 **$179**

'How to Install Burglar Alarms'

Our do-it-yourself publication makes securing your house a breeze!
B 6012

$3.95

Multi-purpose Alarm

This alarm uses a simple reed switch, is key operated and has entry/exit delay times. Includes a loud piezo siren. Easy-to-install. Powered by 1 x 9V battery (not supplied)
L 5179

$29.95

1 YEAR WARRANTY

2-Zone Alarm Module

Features two independent N.C (normally closed) sectors, instant and delayed; siren drivers capable of driving 2 x 8 Ohm horn speakers, a 3A output relay, entry/exit delay, 3-minute automatic cut-off siren timer and reset. Unit requires a supply voltage of 12-16V DC. Size 133x114x38mm.
L 5144

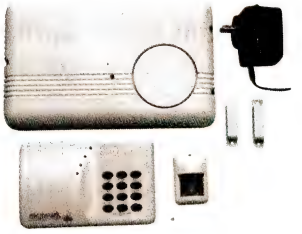
$39.95

2-Zone Security Alarm System

Features a backlit keypad, selectable entry/exit delay times and siren duration. Includes main control unit with optional battery back-up, miniature PIR detector, reed switch, external siren with cover, power adaptor and easy-to-follow instructions.
L 5180

$149

1 YEAR WARRANTY



3-Sector Home Security System

Security is yours with this affordable system – it covers the average home. Activated by a single key, it includes a high quality 3-sector alarm panel, two passive infra-red sensors (PIR) for area surveillance, five pairs of magnetic switches for use on doors, windows, a panic button, an external horn siren, 50m 4-core alarm cable and plug-in power supply. You can install it yourself using the instructions supplied.
L 5169 **1 YEAR WARRANTY**

$249

Deluxe 4-Sector Home Security System

All the features of the system above plus much more! It uses a four-digit code to control the system, which means you don't have to carry a key. Its control panel has four user-selectable sectors, allowing you to disable the alarm in any area of your home while leaving the other sectors armed. Includes a high quality four-sector alarm panel, two passive infra-red sensors (PIR), five pairs of magnetic switches for use on doors and windows, a panic button, and external horn siren, 50m 4-core alarm cable and plug-in power supply. You can install it yourself with the easy-to-follow instructions supplied.
L 5149 **1 YEAR WARRANTY**

$329

Digital Access Keypad

Dual output programmable digital access control keypad designed for door strike and security alarm systems. Comes with a mounting block and is fitted with a tamper switch for added security. Designed for easy installation, can be fixed to a wall and runs off 12V DC. Suitable for L 5149 and L 5169 alarm packages.
L 5288

$69.95

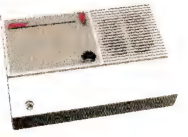
NESS D-8 Security Alarm Panel

Features 8 fully programmable zones and an additional 24 hour input. This security panel has total Zone flexibility using any of 16 different zone applications. Supports up to 5 remote LED keypads, 15 user codes, Duress & Fire Alarm feature, 30 event memory from keypad and much more! Includes alarm panel, LED keypad, 12V 7AH SLA battery, power adaptor and installation/instruction manual.
L 7300

EXCLUSIVE TO POWER HOUSE & direct link

NEW FOR '99

$299



The Complete Home Security Pack

Professional quality security system!

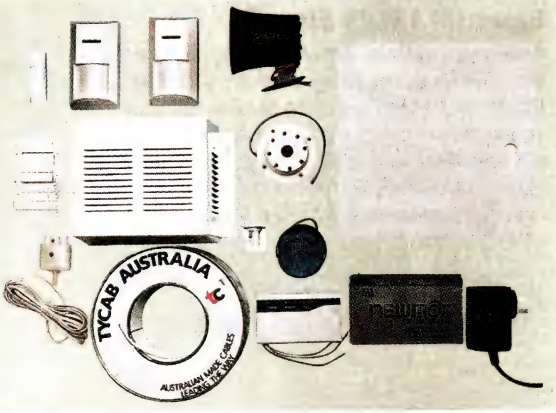
This system gives you the professional quality home security in one take-home pack. Its built-in alarm dialler makes it ideal for connection to a monitoring service. Comes with everything you need to protect your home and belongings.
L 5720

$699

Features

- Professional 6-sector alarm panel
- Digital entry keypad
- 2 x passive infra-red sensors
- 2 x magnetic reed switches
- Emergency button
- High pitched internal siren
- External horn speaker and cover
- Flashing strobe light
- Deterrent stickers and instructions
- Battery and mains power adaptor
- 100 metres of alarm cable

1 YEAR WARRANTY



Wireless Alarm Systems

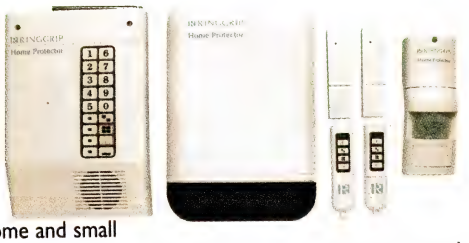
With no messy wires, these alarm systems are the most practical approach to home security. They're portable, reusable and offer easy do-it-yourself installation with comprehensive, easy-to-follow instructions.

Air Block Alarm System

The Air Block security alarm system is totally portable and therefore completely versatile and affordable for apartments, homes, office and warehouse operations. It has the added advantage of being utilised in cars, boats and caravans. The Air Block is operated by a simple 1-key system and is a volumetric alarm working on air pressure changes. Protects an area from 2-500m². Requires 6 x 'AA' batteries not supplied.

L 5740 **$249**

Home Protector Deluxe Wireless Alarm System



The Home Protector is ideal for use in an average sized family home and small business where high quality general protection is required. Includes control panel, 1 x PIR detector, 2 x magnetic reed switches, 2 x remote controls, external siren/strobe, battery back-up and a mains power adaptor.

L 5715 **2 YEAR REPLACEMENT WARRANTY** **$399**

Optional Add-on Accessories

	Cat No.	Price
Home Protector PIR Detector	L 5706	$99.95
Home Protector Door/Window Monitor	L 5707	$49.95
Home Protector Remote Control	L 5708	$29.95
Home Protector Keypad	L 5709	$119.00

EXCLUSIVE TO Power House & direct link

Smoke Detectors

Bargain Smoke Detector

This smoke detector senses smoke early and sounds the alarm, giving you valuable time to escape. Requires 9V alkaline battery not supplied.

L 5116 *Limited Stocks **$8.90**

Universal Smoke Alarm

This reliable stand-alone alarm is suited to small residential purposes. No wiring required, features test button for maximum reliability and weak battery signal. Easy-to-install. Battery included.

L 5238 *Limited Stocks **$12.85**

click Kitchen Alarm

NEW FOR '99

The Kitchen Smoke Alarm with alarm silencer button is ideal for areas that are subject to false alarms. Features; low battery warning, loud piezo electric alarm, battery-out indicator, operating indicator and test button. Battery included.

L 5247 **$19.95**

Puppy Smoke Alarm

This wall mountable, child-safe smoke alarm 'puppy' includes battery, colouring-book and a home fire safety kit. Australian Standards approved.

L 5249 **5 YEAR WARRANTY**

Safety's Sake **$19.95**

Security Lights

Security Flood Light

It uses an infra-red detector to detect movement, automatically switching the twin floodlights on when the surveillance field is broken. With a 15m x 120° sensor range and adjustable time control. Floodlight globes not included. Note: Must be installed by a licensed electrician.

L 5536

NEW FOR '99

ARLEC **$28.50**

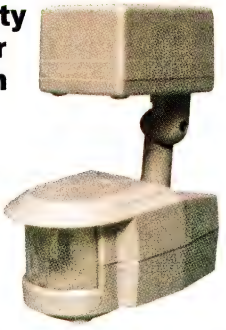
DIY Security Light

Incredibly easy to install – no wiring – just plugs into any bayonet globe socket. Floodlight automatically turns on when you approach, and off when you leave. With adjustable range (up to 15m) and time settings (up to 3 mins). Floodlight globes not included.

L 5549

ARLEC **$38.50**

Security Sensor Switch



Attach this to your lights and when movement is detected they'll turn on! It's weather-proof, has 10m x 180° range and operates manually or automatically. 1,000W max. Note: must be installed by a licensed electrician.

L 5348

ARLEC **$34.95**

Portable Sensor Light

Movement activated PIR light switches itself on as you approach and off after you leave. Battery operated with in-built daylight sensor. Indoor use only, ideal for cupboards, hallways and sheds.

L 5340

ARLEC **$27.50**

12.5cm (5") B&W 4-Channel Observation System

Easy-to-install. Ideal for monitoring your home or small business, this observation system can connect up to four cameras. The high-quality monitor displays the clearest possible picture and the camera requires minimal light, as it has built-in infra-red LEDs. It has adjustable camera auto-switching speed (2-60 seconds) and manual/auto selector. Can be easily connected to a VCR. Includes monitor, one camera and a 20m cable.

L 5810 **$399**

Extra Camera

Optional camera that can be added to the 5" 4 channel system. Includes mounting bracket and a 20m cable.

L 5811 **$279**

Additional Cables

40m cable	L 5814	$69.95
60m cable	L 5813	$99.95

EXCLUSIVE TO POWER HOUSE & direct link

25.5cm (10") B&W 4-Channel Observation System

This system has a large 10" screen. It can be connected with up to four cameras and has a two-way audio system between the camera and monitor. The camera has an in-built infra-red LED which allows the system to work in the dark. Can be easily connected up to a VCR. Includes one camera, a 20m cable and a monitor.

L 5820 **$499**

Extra Camera

Optional camera that can be added to the 10" and 12" systems. Includes mounting bracket and a 20m cable.

L 5821 **$329**

Additional Cables

40m cable	L 5824	$79.95
60m cable	L 5823	$109.95

EXCLUSIVE TO POWER HOUSE & direct link

30.6cm (12") B&W 4-Channel Quad Observation System

Connects with up to four cameras and features switchable individual camera display or the facility of four cameras being displayed on-screen at one time, camera auto-switching speed (2-60 seconds). The camera has built-in infra-red LEDs which allows the system to work in the dark. Can be easily connected to a VCR. Includes a monitor, one camera and a 20m cable. For additional camera use the L 5821.

L 5825 **$999**

**Not displayed in all stores but can be ordered.*

NEW FOR '99

B&W CCD Camera System

Small black and white camera features a wide 92° viewing angle. Features 6 infra-red LED's for viewing at night and in low light conditions, operating at 0.5 lux minimum illumination. Comes with mounting bracket, video signal cable with RCA plug and is ideal for use in a house, shop, baby room or as a front door guard. Requires a 12V DC 200mA power adaptor (not supplied).

L 5871 **$169**

NEW FOR '99

Micromark CCTV Camera System

State-of-the-art B&W camera technology giving high picture quality, with 12 infra-red LED's for improved night-time vision (up to 2m). Its built-in camera microphone (allows you to watch and listen). Features wide angle 92° glass lens, moisture prevention system for indoor/outdoor use. Includes one camera, a 17m cable, adjustable mounting bracket for outdoor use, a 9V DC power adaptor and an illustrated installation manual.

L 5880 **$199**

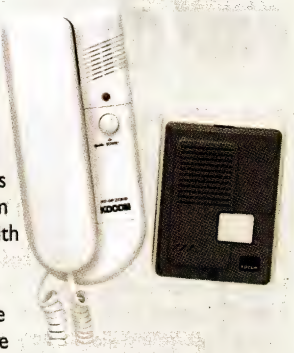
Video Door Intercom

NEW FOR '99

When a visitor presses the 'call' button, a welcoming chime is triggered, while a video camera transmits their image to the monitor located inside. Includes a two-way intercom that allows you to talk to the visitor, an infra-red LED lamp which allows the system to work at night and optional door latch release facility. Easy D.I.Y installation. Cable not supplied.

L 5803 **$469**

Security Door Intercom System

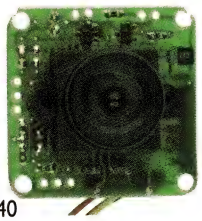


Simple to install, this intercom uses a two-wire system and is supplied with 10m of cable. Features optional door latch release facility and volume control for the chime. The unit requires either 4 x 'AA' batteries or a DC power adaptor (not supplied).

L 5808 **$79.50**

Security Cameras

CMOS Camera Module (B&W)

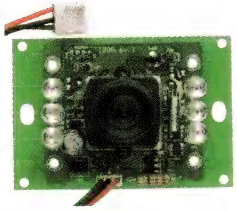


- Maximum illumination 1 lux at F1.4
- Power source: 12V DC (20mA)
- Pixels: 352x288
- Resolution (TV lines): 240
- S/N Ratio: > 46dB
- Lens: 3.6mm/F2.0
- Size: 28mm x 28mm x 37mm

L 5874

NEW FOR '99 **$69**

CCIR Camera Module B&W With Infra-red LEDs



- Power source: 12V DC (160mA)
- 1 Lux Minimum Illumination
- Pixels: 512x492
- Resolution (TV lines): 380
- S/N Ration: > 45dB
- Lens: 3.6mm
- Size: 40mm x 35mm

L 5872

NEW FOR '99 **$99**

CCIR Camera Module B&W With Audio

Features

- Power Source: 12V DC (110mA)
- 1 Lux Minimum Illumination
- Pixels: 510x492
- Resolution (TV lines): 380
- S/N Ratio: > 45dB
- Size: 32mm x 32mm

L 5873

NEW FOR '99 **$109**

Dummy Cameras

Metal Dummy Security Camera

- Uses real metal camera housing
- In-built red LED (requires 12V DC power supply to operate)
- Fake DC lead and Coaxial cable with BNC connector
- Has an adjustable mounting bracket
- Ideal for small business premises

L 5851

$79.90

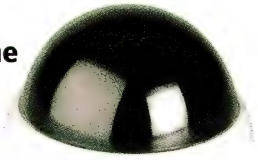
Dummy CCD Camera

NEW FOR '99

Features realistic metal camera housing, realistic camera lens, sturdy metal bracket and swivel mount. Also features optional flashing red LED. (Requires 1 x 'D' size battery).

Large Size: 190x58x58mm	L 5852	**$69**
Huge Size: 285x98x90mm	L 5853	**$99**

Dummy Dome Camera



- Dummy Security Camera ideal for small shops as a theft deterrent
- Easily installed just screws onto ceiling
- Uses a real camera housing so it looks realistic

L 5854

$29.80

NEW FOR '99

Night Viewers

Night Viewers are optoelectronic devices designed for night viewing of wildlife, terrain and people. Ideal for farmers, security companies, wildlife and bird watchers, astronomers, caving enthusiasts and particularly boat owners who need to find their mooring in the dark. Night Vision is digitally enhanced viewing – when using the Night Viewers, you are not actually viewing the scene before you but a video image of the scene.

Apple NightEagle

7000 x light amplification, 2.4 x magnification, weighs 800g, 40° field of view. Comes complete with 9V battery and soft carry case. One year replacement warranty.

L 8180

$349

Sibir Zoom Spotting Scope

One of the most advanced lightweight spotting scopes available.

Features include rubber armoured shockproof design, zoom lens, 20X and 50X magnification, 50mm objective diameter and compact size. Ideal for mounting on a tripod (recommended). Comes with a carry case.

L 8110

NEW FOR '99 **$229**

Apple NightEyes Micro

7000 x light amplification, 1.6 x magnification, weighs only 268g, 10° field of view. The NightEyes Micro comes complete with a soft carry case, 2 x 'AA' batteries and an infra-red illuminator. One year replacement warranty.

L 8160

$449

Apple NightEyes

Apple Night Vision

10,000 x light amplification, 4.3 x magnification, weighs only 1.3 kg, 40° field of view. The NightEyes comes complete with a soft carry case, shoulder strap, 2 x 'AA' batteries and an infra-red LED illuminator with case. One year replacement warranty.

L 8150

$799

Cyclop P2 Night Viewer

NEW FOR '99

7000 x light amplification, 1.7 x magnification, weighs 400g, 20° field of view. Cyclop P2 utilises a high voltage power unit on piezoelectric crystals for powering of the image intensifier tube, this avoids the use of batteries.

L 8165

$498

Sirens

PCB Mount Piezo

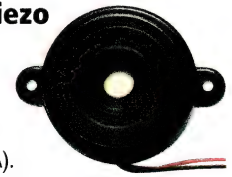
Frequency of 3.3kHz, 3-20V DC (13mA @ 12V DC), Output: 84dB, Size: 23.8mm x 12.2mm.
L 7020
$4.35

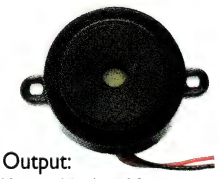
Electronic Buzzer

4-15V DC (15mA).
Output: 70dB
Size: 23(l) x 17(w) x 16mm(h).
Mounting holes 26mm.
L 7009
$3.50

Electronic Buzzer

NEW FOR '99
PCB Mount 8-16V DC (25mA),
Output: 75dB,
Size: 23(l) x 17(w) x 16mm(h).
L 7010
$3.95

Slim Piezo Alarm

In-built driver.
3-30V DC (2.5-19mA).
Output: 90dB
Size: 17mm (dia.) x 14mm high.
L 7024
$6.50

2-Tone Piezo

In-built driver.
9-12V DC (40-50mA). Output: 94dB. Size: 40mm (dia.) x 23mm.
Mounting holes: 46mm.
L 7027
$9.95

Piezo Buzzer 2-Tone

NEW FOR '99
Single tone or pulse 2-tone.
Frequency: 3.5kHz, 6-16VDC (15mA) Output: 90dB.
L 7019
$9.95

Micro Piezo Siren

With adjustable bracket.
12V DC (250mA)
Output: 100dB.
L 7029
$16.95

Indoor Siren

7.5-15V (200mA)
Output: 105dB
Size: 85mm (diam.) x 43mm.
L 7025
$18.95

Siren 10.2cm (4") ABS

Sounds an ear-piercing 120dB siren.
12V DC (1.15A).
Size: 102mm (dia.) x 113mm(l)
L 7034
$22.95

11.5cm (3.5") Siren

Features 6 different sounds, working on a rotation system. 12V DC (600mA).
Output: 110dB.
L 7036
$21.95

Anti-Cut 12V Siren

12V DC (300mA)
Output: 120dB.
Battery back-up means that if the wires are cut, the siren will sound. Includes mounting bracket and manual override.
L 7035
$39.95

Siren Piezo Rainproof

NEW FOR '99
7-14V DC (250mA)
Frequency 2.4 – 3.7 kHz
Output: 102dB
L 7037
$19.95

Rainproof Siren & Strobe Light

NEW FOR '99
7-14V DC (500mA)
Frequency 2.4 - 3.7 KHz
Output: 100dB
L 7038
$34.95

Horn Speakers

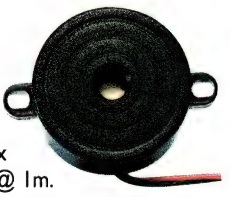
10.2cm (4") Horn Speaker

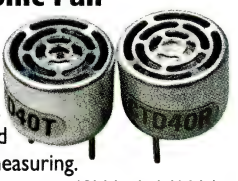
Features an 8 Watt output, 8 Ohm impedance and weighs only 450 Grams.
L 7040
$17.95

Transducers

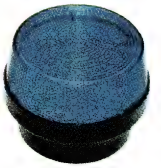
Piezo PCB Mount

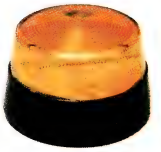
Operating voltage (30Vp-p Max), sound pressure level @ 10cm/10Vp-p, square wave 92dB @ 40kHz/10Vp-p, square wave 11mA, capacitance @ 1kHz/1V 25,000pF (+/- 30%).
Size: 22.1mm x 6.3mm.
L 7021
$1.95

Piezo

5mm high x 30mm diameter.
3-30V p-p AC. Approx 80dB SPL @ 1m.
Centre frequency: 4.5+/- 0.5kHz.
L 7022
$3.25

Ultrasonic Pair

Great for remote control, movement sensing and distance measuring.
Centre frequency: 40kHz (+/-1kHz), bandwidth: 3.5kHz @ -6dB.
L 7055
$12.95

Strobe Lights

Mini Strobe Blue

65mm diameter, 12V DC (150mA).
Flash rate: 75/minute.
L 6002
$21.95

Mini Strobe Yellow

75mm diameter x 45mm high. 12V DC (180mA) Flash rate: 90/minute.
L 6003
$21.95

Strobe Lights

Can be mounted outside.
95mm diameter. 12V DC (180mA).
Flash rate: over 90/minute.

Blue	L 6000
Red	L 6004
Amber	L 6006

$34.95 ea

Red Rotary Warning Light

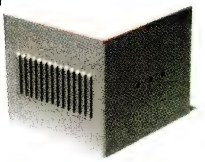
Ideal for promotional use and store displays 10W output. 12V DC (1A) power supply needed.
L 6005
$39.95

Siren Covers

Plastic Siren Cover

NEW FOR '99
Plastic Siren Cover made out of Hi-Density UV-Proof Polypropylene.
L 5305
$21.95

Rhino

Metal Siren Cover

Protects the siren/horn from the elements. Complete with tamper switch.
L 5300
$26.95

Rhino Accel Car Alarm

• Microprocessor controlled • 2-wire connection, install yourself • Multi-function remote control • 2-stage shock sensor • Personal panic trigger via remote control • Current sensing circuit • Auto siren reset & much more

L 5430

$79

Rhino Accel Plus Car Alarm

• 2 multi-function remote controls
• Engine immobilisation • Back-up battery
• 2-stage shock sensor • Personal panic trigger
Visual arm/disarm via indicators
• Central locking interface option
and much more

L 5435

$179

Rhino Car Alarm/Immobiliser

• 2 x 2-button remote controls
• Impact sensor isolation and electric boot release option • Battery back-up • Rolling code technology • Personal panic button
• Red flashing LED • Visual arming/disarming
• Internal engine immobilisation • Central locking interface and much more

L 5419

EXCLUSIVE TO Power House & direct link

$299

Rhino Car Alarm and Immobiliser

NEW FOR '99

• Australian Standards Approved
• Insurance Company Approved*
• Two Point Immobilisation
• Ultimate Protection Level
• 20 + Programmable Features

Please check with your insurance company

L 5429

EXCLUSIVE TO Power House & direct link

$398

Rhino PTX Learning Remote

• Ideal for car alarms, home alarms, panic buttons, garage doors etc.
• Copies most radio frequency fixed code remote controls
• Replaces that old or worn-out remote control • Frequency range 255MHz to 500MHz
• 4 Channels (ie 4 remote controls or 4 functions)

L 5440

NEW FOR '99

$48

Rhino Central Locking System

• 4-door kit • Unlock and lock your car via the driver's door • Use in conjunction with most car alarms and immobilisers • Allows remote control keyless entry to your vehicle

L 5421

$69

Ultrasonic Car Reverse Alert

NEW FOR '99

Protects against damage and accidents. Putting gear in reverse turns on sensor. Ultrasonic sensor detects objects and the alarm beeps to warn you of proximity. Depth and Width of Sensor Range: 85cm, height of Sensor Range: 80cm.

L 5470

$129

- Australian designed, engineered, state-of-the-art security systems.
- Rhino Helpline available 1800 807 387.
- Rhino's introduction of ETS™ environment tuned sensors makes false alarms a thing of the past.
- Rhino SSR™ solid state remotes are just about unbreakable.
- **Professional installation available.**

Rhino Remote Immobiliser

• Supplied with 2 rolling code, remote controls, red LED and 40A relay • Allows simple conversion (in most cars) of central locking to remote control

L 5426

$149

Rhino Microwave Detectors

Ideally suited to convertible (soft-top) vehicles. Not affected by air, the microwave sensor is designed to detect mass movements before triggering an alarm condition.

L 5424

$89

EXCLUSIVE TO Power House & direct link

Rhino Car Alarm Paging Unit

Features compact transmitter module, light weight receiver with belt clip & on/off switch, audible alarm warning device, with a range of up to 1km and an on glass antenna. Connects to L 5419 car/alarm immobiliser.

L 5428

$199

EXCLUSIVE TO Power House & direct link

Rhino Remote Central Locking & Immobiliser Kit

Remote central locking kit with engine immobilisation. Features rolling code (anti code grabbing, anti scanning), a high intensity flashing LED and a power fail-safe (remembers if it was armed or disarmed after power is disconnected).

L 5422

$249

EXCLUSIVE TO Power House & direct link

Rhino Ultrasonic Detectors

Ideally suited to fully enclosed (hard top) vehicles. The entire cabin area is filled with ultrasonic sound waves. When wave disturbance is registered, the alarm is triggered.

L 5425

$69.95

EXCLUSIVE TO Power House & direct link

Car alarm stickers

These prominent stickers function as an effective deterrent to car thieves. Apply to the inside of the window.

L 5310

$2

Alarm Warning Sticker

Let them know your car is protected. Circular sticker, 5cm diameter.

L 5313

$2

Door/ Boot/ Bonnet Switches

Easy to fit and compatible with any car alarm.

L 5256

$4.25 pr

Adjustable Door Pin Switch

This switch features adjustable length for professional installation.

L 5252

$3.25

Red Car Alarm LED

An ideal, easy-to-install, flashing security light. Can be wired to ignition as a theft deterrent.

5mm	L 5322	$9.95
10mm	L 5323	$12.95

Alarm Switches

Concealed Magnetic Reed Switch
Undetectable when recessed in wood doors or windows. For any alarm with a normally closed circuit.
L 5212 **$6.95**

Surface Mount Magnetic Reed Switch

In plastic casing for easy mounting. For any alarm with a normally closed circuit.
L 5210 **$4.95**

N.O & N.C Magnetic Reed Switch

With both normally open and normally closed contacts. Easy to mount.
L 5211 **$6.95**

Barrel Switches
Includes 2 keys for switching home and car alarms.

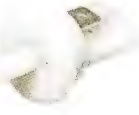
Mini Tubular
L 5296
Mini Standard
L 5295
$7.95 ea

Magnetic Reed Switch

N.O (normally open) magnetic reed switch set.
L 5240 **$6.95**

Mercury Tilt Switch

Activated when tilted more than 15°. Great for use on motorbike alarms.
L 5241 **$3.25**

Alarm Tamper Switch


Protect alarm panels and siren covers. Mountable to most alarm systems on a normally closed circuit.
L 5286 **$2.95**

Large Tubular
L 5291
Large Standard
L 5290
$9.95 ea

PIR (Passive Infra-red) Detectors

Micromark PIR

NEW FOR '99

Used as an additional PIR detector for the L 5180 2 zone micromark alarm system. Range 12m through 90°, with visual LED alarm indicator. Size: 60x40x24mm.
L 5024 **$29.95**

Mini PIR Detector

Adjustable range up to 12m through 95°. Mount on any flat surface or corner.
L 5011 **$39.95**

Mini PIR Detector

12x12m @ 90° range. Single-shot or pulse count selectable. With dual element pyro-electric sensor, radio frequency interference filter.
L 5018 **$49.95**

PIR Detector

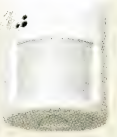
Features 2 dual element sensors. With wide angle, barrier out pet alley lenses, built-in range adjustment slide.
L 5721 **$99.95**

Ness TEN + PIR Detector

15 x 30m long range. Features 20 dual element zones in 4 layers, relay output, tamper contacts, high RF immunity and is pulse count and sensitivity selectable.
L 5021 **$59.95**

Ness Quantum 360° PIR Detector

360° sensor angle. Provide coverage up to 8m when installed on a standard 2.4m ceiling. Features 33 dual element detection zones, relay output, tamper contacts and is pulse count and sensitivity selectable.
L 5022 **$59.95**

Ness Quantum Dual PIR Detector


15 x 15m range. Features a combined microwave and dual element PIR detector, tamper output and alarm relay output. The PIR zones have 20 dual layers plus 2 creep zones.
L 5023 **$99.95**

Cam Lock

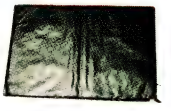
Ideal for locking alarm panels, cupboards etc. Cam size: 32mm. 2 keys supplied.
L 5297 **$5.45**

Alarm Warning Sticker
Size: 130 x 70mm.
L5314 **$2.50**

Alarm Warning Sticker
Size: 130 x 70mm.
L 5311 **$2.50**

Aluminium Sign
Size: 245 x 270mm.
L 5312 **$9.95**

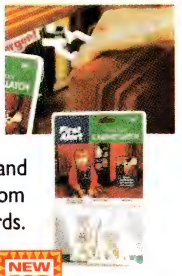
Pressure Mat
N.O. contacts.
Size: 790 x 540mm. **$32.50**
L 5270



First Alert Appliance Lock

Helps keep little hands out of refrigerators, freezers and ovens.
L 5650

NEW FOR '99 **$3.95**

First Alert Cabinet Latches


Helps keep cupboards and cabinets shut – and children away from household hazards. Pack of 4.
L 5654

NEW FOR '99 **$5.25**

First Alert Power Outlet Plugs

NEW FOR '99

Innovative design makes these plugs easy for adults to remove yet keeps children safe from dangerous 240V electrical outlets/power points. Pkt 12.
L 5656 **$3.95**

First Alert Video Machine Lock

NEW FOR '99

Does your child think your VCR is the toaster or a money bank? If so then this product is for you. Keep children from sticking food or other items into the VCR. Universal fitting system.
L 5661 **$5.50**

'Rayovac' Alkaline Batteries

No./Type	Cat No.	Price
2 x 'AAA' 824	S 7802	$4.20
4 x 'AAA' 824	S 7803	$7.25
2 x 'AA' 815	S 7804	$3.90
4 x 'AA' 815	S 7805	$6.25
2 x 'C' 814	S 7806	$5.75
2 x 'D' 813	S 7807	$6.50
1 x '9V' A1604	S 7808	$5.95

Made in the USA.

Calculator Batteries

Long life batteries in all the popular sizes to suit most scientific and statistical calculators and other databank type devices.

Type	Cat No.	Price
ECR1616 Lithium	S 3333	$4.75
ECR2016 Lithium	S 3332	$4.75
ECR2025 Lithium	S 3330	$4.75
ECR2032 Lithium	S 3331	$4.75

No./Type	Cat No.	Price
2 x A76 Alkaline	S 3061	$4.25
2 x 186 Alkaline	S 3062	$4.25
2 x 189 Alkaline	S 3063	$4.25

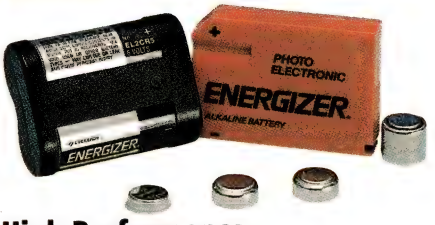
High Performance Watch Batteries

Description/Type	Cat No.	Price
High Drain 357	S 3293	$4.75
High Drain 381	S 3291	$3.35
High Drain 386	S 3295	$3.35
High Drain 389	S 3292	$3.35
High Drain 390	S 3294	$3.35
High Drain 391	S 3296	$3.35
High Drain 392	S 3299	$1.75
High Drain 396	S 3049	$3.35
Low Drain 362	S 3050	$3.35
Low Drain 364	S 3051	$3.35
Low Drain 377	S 3055	$3.35
Low Drain 384	S 3052	$3.35
Low Drain 397	S 3054	$3.35
High Drain 379	S 3298	$3.35
High Drain 371	S 3056	$3.35

Energizer

New advanced formula, Energizer alkaline batteries last longer than previous Energizer alkaline batteries. Recommended for today's high drain devices where long lasting power is required.

No./Size	Cat No.	Price
2 x 'AAAA'	S 3275	$4.95
2 x 'AAA'	S 3278	$5.15
4 x 'AAA'	S 3276	$8.65
2 x 'AA'	S 3281	$4.35
4 x 'AA'	S 3287	$7.95
6 x 'AA'	S 3290	$11.75
2 x 'C'	S 3282	$6.25
2 x 'D'	S 3284	$6.75
1 x 522 (9V)	S 3286	$6.50
2 x 522 (9V)	S 3215	$12.25



High Performance Photographic Batteries

High quality batteries designed especially for the high power demands of photographic equipment and other new technology devices.

Type	Description	Cat No.	Price
EPX76	1.5V Silver Oxide	S 3080	$7.95
2L76	3V Lithium	S 3060	$16.50
EL223AP	6V Lithium	S 3067	$24.95
EL2CR5	6V Lithium	S 3068	$24.95
EL123AP	Lithium	S 3334	$16.95
A544	6V Alkaline	S 3289	$9.50
539	6V Alkaline	S 3072	$9.50
2 x 'N'	Alkaline	S 3288	$4.95

Energizer
"NO BATTERY LASTS LONGER"

Heavy Duty Eveready Reds

For general purposes. Carbon Zinc.

No/Type	Cat No.	Price
4 x 'AA'	S 3099	$4.25
6 x 'AA'	S 3090	$5.75
2 x 'C'	S 3107	$3.05
2 x 'D'	S 3109	$3.05
1 x 9V	S 3106	$3.50

Super Heavy Duty Eveready Blacks

No/Type	Cat No.	Price
10 x 'AA'	S 3110	$11.50
4 x 'C'	S 3112	$7.75
4 x 'D'	S 3114	$7.75

Hearing Aid Batteries

High quality Eveready Hearwell Zinc Air batteries to fit most popular hearing aids. In handy dispenser pack.

Type	Cat No.	Price
4 x AC675/4	S 3038	$4.50
4 x AC13E/4	S 3039	$4.50
4 x AC312E/4	S 3040	$4.50
6 x S13E/6	S 3041	$10.75

Car Alarm and Remote Device Batteries

Ideal for car alarms and many remote control devices.

Type	Description	Cat No.	Price
A 23	12V Alkaline Energizer	S 3335	$2.50
GP27A	12V Alkaline	S 3434	$2.50
GP23A	12V Alkaline	S 3435	$2.25
GP11A	6V Alkaline	S 3436	$2.25

Lithium – The Power of The Future

With a shelf life of up to 10 years, the Lithium battery lasts between three and five times longer than an alkaline. They offer exceptional low temperature performance, weigh 30% less than alkaline batteries as well as providing an environmentally friendly alternative. Suit walkmans, video cameras, lap top computers and camera flashes, etc.

L91BP2 2 x 'AA' Pk S 3261

$12.25

Lithium Ultralife 9V Battery

Made in the USA, ideal for smoke detectors.
S 3165

$16.85

Dick Smith Electronics Nicad Rechargeables

Our own brand of rechargeable NiCad batteries are high quality, reliable, value for money and rechargeable over 500 times.

Size	Description	Cat No.	Price(ea)
'AAA'	180mAh	S 3305	$4.25
'AA'	600mAh	S 3300	$3.95
'C'	1.2Ah	S 3301	$7.95
'D'	1.2Ah	S 3303	$7.95

NiCad Rechargeable Batteries Packaged for Convenience

Size	Description	Cat No.	Price
2 x 'AA'	600mAh	S 3151	$7.85
4 x 'AA'	600mAh	S 3150	$14.20
2 x 'C'	1.2Ah	S 3152	$15.70
2 x 'D'	1.2Ah	S 3154	$15.75
1 x 9V	9 volt	S 3155	$17.85

Heavy Duty Rechargeable NiCad Batteries

For long life, high power and reliability. Japanese-made NiCad batteries.

Size	Description	Cat No.	Price(ea)
'AA'	1000Mah	S 3304	$6.25
'AA'	700mAh	S 3312	$4.35
'C'	2Ah	S 3311	$11.95
'D'	4Ah	S 3310	$15.95

Arlec NiCad Rechargeable Batteries

Black label NiCads from Arlec.

Size	Cat No.	Price
2 x 'AAA'	S 3406	$9.15
2 x 'AA'	S 3407	$8.15
1 x 9V	S 3410	$17.50

ARLEC

"Big" RAM (Rechargeable Alkaline Manganese) is new the rechargeable technology that allows you to charge batteries 25 plus times. Ready to use with full 1.5 volt power.

RAM Energy Charger Set

Includes plug-in charger and 4 x 'AA' RAM batteries S 3485

RAM 4 x 'AAA' pack
S 3481 **$16.85**

RAM 4 x 'AA' pack
S 3482 **$15.90**

$39.90

Varta Nickle Metal Hydride NiMh Rechargeable Batteries

No memory effect.

Pack	Description	Cat No.	Price
2 x 'AA'	1100mAh	S 3440	$17.95
2 x 'AAA'	500mAh	S 3439	$18.95
9V	120mA	S 3441	$19.95

Low Cost "Powerhaus" Metal Hydride Rechargeable Batteries

Can be charged more than 500 times with no memory effect.

NiMh	2x 'AAA'	550mA	S 3157	$12.95
NiMH	2x 'AA'	1300mA	S 3159	$12.95

POWERhaus

Lantern Batteries

EVEREADY

Type	Description	Cat No.	Price
509	6V Heavy Duty	S 3240	$6.95
731	6V Heavy Duty	S 3244	$19.95
529	6v Energizer	S 3245	$16.95
1231	6v Super Heavy Duty	S 3248	$25.85

Varta Multifit Video Camera Batteries

Metal Hydride for more power recording time with no memory effect. Consistant high power performance. Suit most model video cameras such as Sony, Panasonic, JVC and compatible cameras.

Type	Description	Cat No.	Price
V 208	6V 1800mAh	S 3442	$89.95
V 213	6V 3600mAh	S 3443	$159.00

Newmax Sealed Lead Acid Batteries Maintenance-free!

Great for a wide range of applications such as communication equipment, memory back-up, security systems, lighting systems etc.

Description	Cat No.	Price
12V 1.2Ah	S 3317	$29.85
12V 3.0Ah	S 3319	$39.75
12V 1.9A	S 3318	$33.80
12V 6.5Ah	S 3321	$46.50
6V 4A	S 6402	$21.95

Computer Clock Batteries 'Rayovac'

To suit most computer clocks and memory back-up functions.

Type	Cat No.	Price
840-1	S 3340	$39.95
2325C-1	S 3339	$6.25
844-1	S 3338	$39.95

Battery tester

Ideal for testing life & power and strength in batteries.

Y 5018

$7.50

Battery Holders

To suit most applications.

Description	Cat No.	Price	Description	Cat No.	Price
2 x 'AAA' terminal	S 6143	$1.10	1 x 'C' Cell	S 6103	$1.45
4 x 'AAA' terminal	S 6145	$1.75	4 x 'C' Cells. Flat	S 6104	$2.05
4 x 'AAA' Snap	S 6140	$1.75	1 x 'D' Cell	S 6101	$1.15
2 x 'AA' Snap	S 6112	$0.95	4 x 'D' Lantern Type	S 6107	$2.00
4 x 'AA' Long	S 6114	$1.20	4 x 'D'	S 6102	$2.15
6 x 'AA' Rectangular	S 6116	$1.60	216 9V Cell	S 6150	$4.95
8 x 'AA' Rectangular	S 6128	$1.75	216 9V Snap Type	S 6100	$0.45
10 x 'AA'	S 6130	$2.15	Lithium Button Type	S 6160	$4.95

NiCad Rechargable Battery Packs

Suits most types of radio control racing cars and similar devices.

Type	Cat No.	Price
9.6V	S 3313	$31.50
7.2V	S 3323	$42.95

NiCad sub-C size 1.4Ah with solder tab	S 3324	$7.95
NiCad C size 2Ah with solder tab	S 3411	$12.95
NiCad AA size 600Ah with solder tab	S 3412	$5.95

Specialty NiCad Rechargeable Cordless Phone Batteries

For cordless phones and similar devices which need high performance batteries that can be constantly charged and discharged.

Description	Cat No.	Price
A. Suits F 7022, Nomad, Freedom 100/200phones	S 3414	$19.95
B. 3.6V Varta NiMh suits F 7002, F 7102, F 7220	S 3325	$18.95
C. 3.6V suits F 7200	S 3326	$18.95
D. 3.6V suits F 5800, F 5805, F 5810	S 3327	$16.95
E. 3.6V suits Panasonic KXA36A plus some Uniden phones	S 3328	$19.95
F. 4.8V suits VOCA, James Hardie, ATD phones	S 3329	$19.95
G. 3.6V Green cap suits Panasonic KX-A37	S 3307	$19.95
H. 3.6V Black cap suits Panasonic KX-A38	S 3421	$19.95
I. 3.6V suits F 7005 phone	S 3314	$19.95
J. 3.6V suits Sanyo cordless phones, Freedom 120/250/400	S 3415	$19.95
K. 3.6V suits Voca CT3800 & other Voca phones	S 3416	$19.95
L. 4.8V suits Voca CT7800 & other Voca phones	S 3417	$24.95
M. 1.2V NiCad N size suits Motorola pager	S 3420	$5.95
N. 3.6V older Panasonic, Access, Callmaster phones	S 3413	$19.95
O. 3.6V suits F 7020	S 3430	$19.25
P. 3.6V suits Akai/NEC 50/ Audioline CDL400	S 3377	$19.95
Q. 4.0V suits Sony phones SPP560F/860F/SPP300	S 3378	$29.95
R. 3.6V suits Uniden phones XC630/xc633	S 3379	$17.95
S. 3.6V suits Freedom 50	S 3380	$19.95
T. 3.6V suits Sony/GE phones	S 3381	$19.95
U. 3.6V suits Shimasu F 7002 plus some Teac phones	S 3382	$19.95
V. 3.6V suits Kambrook phones	S 3383	$18.95
W. 3.6V suits Voca, Bowphone and others	S 3384	$19.95
X. 4.8V suits Audiovox ATT2R, Cobra CP200/ Phonemate phones	S 3385	$22.50
Y. 3.6V suits Telstra 510/520/ F 7315	S 3422	$19.95

Electrical Timers

Great idea for when you are away! You can turn lights on/off to protect your home or even water your garden. Place electrical devices on a timer so you can choose when they turn on & off.

Quickset Timer

Many features including 2-function timer, simple to set on/off switch and manual over-ride. Ideal for the elderly. Very easy to set and operate with clearly identified actuators. No pins to remove or replace & suitable for appliances up to 10Amp.

M 7214 ARLEC **$19.50**

24 hour Timer Switch

Just plug into the mains socket and set it to turn appliances on or off up to 24 times in a day. Comes complete with 8 timer pins allowing 4 on/off programs. Extra pins are available.

M 7481 ARLEC **$24.50**

7-Day Timer Switch

Allows you to automatically switch on/off appliances up to 42 times in any seven days. Comes complete with 16pins allowing 8 on/off programs and has manual override. Extra pins are available.

M 7202 ARLEC **$28.50**

Multi-Timer II

Allows an incredible 48 on/off switching's (15-minute intervals) over 24 hours. There are no switch pins to buy everything is built-in! Easy to set and has manual override.

M 7204 ARLEC **$32.50**

DSE Digital Timer

A highly accurate timer switch that can be operated as both a 24-hour timer and a 7-day timer. You can set switching intervals to the minute with up to 6 programs. Includes LCD display, rechargeable battery back-up and manual override. M 6210 **$49.95**

Wallplate Timer Light Switch

Deters thieves, automatically switches lights on and off. Random setting with accurate LCD timer and easy installation.

M 7213 HPM **$59.95**

Note: All electrical timers are recommended for indoor use only.

Water Timer WTA-1860

Did you forget to water the garden again? This timer allows you to turn on the water sprinkler once a day up to 2 hours in duration.

M 7220 ARLEC **$99.95**

Travel Adaptors

KORJO

You're flying overseas on holiday and you've packed your bags ready to go, but haven't you forgotten something?

Multi Reverse Adaptor MR02

Converts USA, Japan, Europe, Great Britain and many other mains plugs to the Australian system. Earthed for safety. Does not convert voltage.

M 7303 **$11.70**

Korjo Travel Adaptor – 3 pack

3 pack containing M 7312 (Aussie to UK), M 7314 (Aussie to Europe) and M 7316 (Aussie to USA). These adaptors do not covert voltage.

M 7310 **$19.95**

Australian to UK

Converts Australian mains plug to fit UK, Ireland, Singapore, Hong Kong, parts of the Middle East and Africa. Does not convert voltage.

M 7312 **$8.95**

Australian to Europe

Converts Australian mains plug to fit European style. Also fits Bali, Noumea, Tahiti, parts of Middle East, Asia and South America. Does not convert voltage.

M 7314 **$8.95**

Australian to Japan

Converts Australian mains plug to suits Japan, Mexico, Taiwan and parts of South America. Does not convert voltage.

M 7315 **$8.95**

Australian to USA

Converts Australian mains plug to suit USA and Canadian style plugs. Does not convert voltage.

M 7316 **$8.95**

Step-Up Transformer Adaptor

To allow Australian appliances that operate on 220V AC – 240V AC to work in countries that operate on 110V AC – 120V AC eg. USA.

115-240V 24VA Adaptor

Powers small appliances overseas. Not for use in Australia. Input: 115V, Output: 240V 24VA.

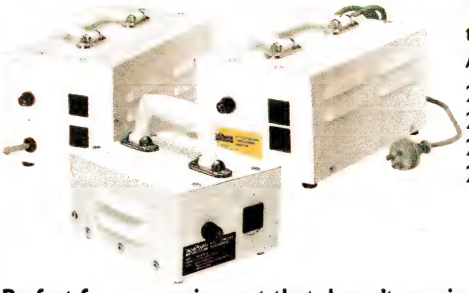
M 1179 **$49.95**

115-240V 65VA Adaptor

Powers larger appliances overseas. Not for use in Australia. Input: 115V, Output: 240V 65VA.

M 1180 **$99**

Step-Down Transformer Adaptors



These transformers allow overseas appliances that operate on 110V AC – 120V AC to work in Australia. Units reset after 5 minutes if overloaded.

240V-115V	(0.65VA)	M 1151	$99
240V-115V	(250VA)	M 1152	$169
240V-115V	(500VA)	M 1153	$249
240V-115V	(1000VA)	M 1154	$379

Perfect for any equipment that doesn't require more than 24W capacity. Powers small appliances such as small battery chargers and radios. Ensure load doesn't exceed 25W.

240V-115V (24VA) M 1155 **$49.95**

**Higher wattage models above 1000VA available on special order only.*

Standard Extension Leads

click

Extension leads

3m 10A	M 7373	$6.95
5m 10A	M 7374	$8.95
10m 10A	M 7378	$13.95
10m H/D	M 7377	$24.95
10m 15A	M 7079	$28.50

Extension Cords

3.5m 10A	M 7530	$6.95
5.5m 10A	M 7531	$8.95
7.5m 10A	M 7533	$11.95
10.5m 10A	M 7532	$14.95
20.5m 10A	M 7538	$24.95
30m 10A H/D	M 7493	$59.80

NEW FOR '99

RINGGRIP

EXCLUSIVE TO POWER HOUSE & direct link

Extension leads with Swivel Head

ARLEC

2m 10A	M 7362*	$8.40
3m 10A	M 7363*	$10.40
5m 10A	M 7364*	$13.40
7m 10A	M 7365*	$16.40
10m 10A	M 7366*	$19.40

EXCLUSIVE TO POWER HOUSE & direct link

Double Adaptors

Standard Double Adaptor

Fits any standard wall socket.

M 7100

HPM $4.25

Double Adaptor Slim Left

M 7106

HPM $4.25

Double Adaptor Slim Right

M 7107

HPM $4.25

Double Adaptor Vertical

Fits any standard wall socket

M 7108

click $4.25

Power Boards

From 4 to 12 outlets from just one power point! All come with fitted cord and plug and are rated at 10 amps, 2400 watts.

Power Board 4-Way

click

Features overload protection switch that automatically disconnects the power should the draw exceed 2,400 watts.

M 7114 $9.95

Power Board 8-Way

HPM

Changes a single powerpoint into 8 outlets and features overload protection.

M 7118 $26.50

Power Board 12-Way

HPM

Changes a single powerpoint into 12 outlets with overload protection.

M 7120 $39.95

Power Board 6-Way

ARLEC

Converts a power outlet into 6.

M 7117 $15.95

click

Power Board 4-Way

Click 4 outlet power board allows up to 4 appliances to operate simultaneously. Features overload protection switch.

M 7119 $14.50

HPM

4-Way Switch Power Board

Changes a single powerpoint into 4 outlets featuring power switch for each outlet. M 7133 $52.50

Piggy Back Extension Leads

RINGGRIP

1.5m 10A	M 7380	$6.95
2.5m 10A	M 7381	$8.95
4.5m 10A	M 7382	$11.95
6.5m 10A	M 7383	$14.95
8.5m 10A	M 7384	$17.95

IEC Connectors

Female Line Connector

3-pin socket to suit 3-pin IEC plugs as used on computer equipment, etc. Rated at 10amps. Australian Approved.

M 7060 $5.95

Female Chassis Connector

Flush finish socket accepts 3-pin IEC line plug. Rated at 10apms.

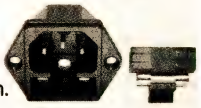
M 7064 $2.95

Male Chassis Connector

Suitable for flush mounting on computer, hi-fi equipment etc. Accepts IEC line socket. Rated at 10amps.

M 7066 $2.95

Male Chassis Connector



With fuse holder 5x20cm.

M 7068 $4.95

Tamiya Type Connectors

Supplied with one male and one female end.

M 9619 $10.95

NEW FOR '99

5-Switch Power Board

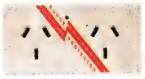
Five independently switched power outlets with safety overload protection and reset button.

M 7134 KAMBROOK $44.50

Surge Protection Accessories

Mains surges occur from mains system switching or from lighting. These surges or spikes can cause damage to your equipment, ranging from simple failure to complete destruction. Although most electrical appliances are fitted with power adaptors capable of withstanding some power spikes and surges, they don't always provide adequate protection. Since it's expensive to repair or replace your damaged equipment, consider taking advantage of the added protection that surge arresters can provide. *Note: These are not lightning arresters and may not protect equipment from direct strikes.*

Surge Double Adaptor



Protects up to two devices with this surge/spike filter, for your valuable electronic appliances.
M 7153
HPM **$14.95**

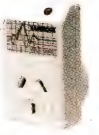
IEC Surge Protection Lead

Ideal for protecting computers or other equipment with IEC inlets.
M 7166 HPM **$22.40**

Single Surge Protector

This low cost unit offers the minimum protection from surges and spikes that can cause harmful damage to appliances.
NEW FOR '99
M 7171 DSE **$22.95**

Surge Guard



Protection from spikes and surges. Simply plug into the mains socket, then plug the device to be protected, into it. M 7150
KAMBROOK **$22.95**

Surge Buzzer

Protects your valuable electronic appliances from damaging surges. Emits a buzzing sound if severe power surge has caused surge protection to become inoperative.
M 7151 click **$29.95**

Surge Power Boards

4-Way Power Board

3 metal oxide varistors (MOVs) protect active, neutral and earth. Red LED indicates power is on and surge protection is active. If LED is off, power board can be used, but no longer protects against surges.
M 7164
ARLEC **$19.95**

6-Way Surge & Filter Board

Protection from surges and spikes whilst also having a power and phone filter, features six outlets & 3 metal oxide varistors (MOVs).
M 7168 **$46.50**

6-Way Surge Board

Turns one power outlet into 6. Slimline power board with surge protection. Protect your valuable electronic equipment from damaging power surges and voltage spikes.
M 7184
ARLEC **$29.95**

4-Way Switch Surge Board

NEW FOR '99

Changes a single powerpoint into 4 outlet whilst protecting against power surges and spikes. Each 240V socket has an individual switch to turn on or off, individual appliance.
M 7165
HPM **$64.50**

6-Way Board

AC platform for Panamax exclusive 'modular' AllPath system. Used alone it protects six AC outlets, it is provided with a 1.8 meter power cord. Application specific modules can be added in any combination to protect additional signal lines. All standard Panamax AC protectors are rated to withstand surges of more than 10 000 amperes at 6000volts. Panamax surge protectors undergo strict quality control testing.
M 7181
PANAMAX **$129**

Telephone/Fax Module

The first module to connect to MAX 6 AllPath. For telephone line protection of fax/modem, one line protected per module.
M 7182
PANAMAX **$39.95**

Antenna & Cable TV Module

The second module to connect to the Max 6. AllPath. For television antenna or cable TV coax connection. Protects television and cable TV boxes.
M 7183
PANAMAX **$39.95**

NEW FOR '99

ZapTrap PC15N Surge Spike Protector

Surge spike protector for use with home computers and electronically operated domestic appliances. Plugs directly into the wall outlet and provides 4 protection outlets. Simple, quick and affordable level one protection.
M 7191
POWERCOR NEW FOR '99 **$79.95**

ZapTrap PC30N Power Filter

Personal series power filters ideal for home/small office applications looking for an all round surge/filter protection product to provide peace-of-mind computing. Fitted with 4 outlets, this unit will protect computer, printer, modem and other connected equipment to the AC power. Level two protection.
M 7192
POWERCOR **$99.95**

ZapTrap PC10N Power Filter Heavy Duty

Business series power filters, this unit incorporates a high performance multi stage tuned filter with a heavy duty front end surge protection circuit. Ideally for busy office areas, rural applications or storm prone areas. Essentially for system reliability. Level three protection.
M 7193
POWERCOR **$169.95**

ZapCatcher PC30N Power Filter with Phone Line Surge Protector

Features the same high specification filter circuitry as used in the PC30N but also incorporates a 20,000 amp Telstra line surge protector to provide back door protection from surges and spikes entering through the modem/fax/phone interface. Level two protection.
M 7195
POWERCOR **$149.95**

ZapCatcher PC10N Power Filter Heavy Duty with Phone Line Surge Protection

Features the same high specification filter circuitry as used in PC10PN but also incorporates a 20,000 amp Telstra line surge protector to provide back door protection from surges and spikes entering from the modem/fax/phone interface. Level three protection.
M 7196
EXCLUSIVE TO POWER HOUSE & direct link
POWERCOR NEW FOR '99 **$199**

Uninterruptible Power Supply (UPS)

SOLA

Don't lose valuable information from your computer when the power cuts out. With a UPS (Uninterruptible Power Supply) your power supply will never be stopped again. With this model you will have surge protection for both power and telephone outlets.

NEW FOR '99

UPS 305 Standby 250VA/190W	M 7631	$299
UPS 305 Standby 425VA/285W	M 7632	$399
UPS 305 Standby 600VA/400W	M 7633	$499

Complete Protection Against Power Problems

Filters surges and sags. If incoming voltage is low, boosts output voltage without draining internal battery. If line voltage is too high, automatically provides power from its battery. Automatically transfers to internal battery power when incoming power is lost. Specifically engineered to work with switching power supplies found in computer, communications & industrial equipment.

320 Series

VA/Watts	Cat No.	Price
400/250	*M 7622	$399
750/470	*M 7623	$729
1000/625	*M 7624	$929

520 Series

750/470 *NEW*	*M 7625	$949
2250V *NEW*	*M 7626	$2995

* EXCLUSIVE TO Power House & direct link

Waterproof Mains Accessories

Mounting Enclosure

Make your standard powerpoint or light switch weather protected with padlock facility. M 7121

$24.95

Mounting Block

Weather protected, suitable for use with M 7123 and M 7124 weatherproof light switch and powerpoint. M 7122

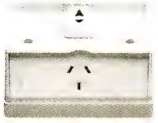
$6.95

Single Switch

Weather protected switch allows for outside installation. Great for floodlight use. M 7123

$24.95

Single PowerPoint



Weather protected powerpoint allows for outside installation. Great around the BBQ and pool area. M 7124

$34.95

Double Switch

Weather protected, double switch, allows for outside installation. M 7125

$34.95

EXCLUSIVE TO Power House & direct link

Double Power Point

Weather protected double power point allows for installation outside. M 7126

$54.95

EXCLUSIVE TO Power House & direct link

Safety Products

Powerpoint Tester

Just pop into the powerpoint and light pattern reveals many faults without the danger of shorts or accidents. M 7103

click

$11.50

Safety Plugs 6-pack

Stop your kids sticking things into the potentially dangerous powerpoint. Play it safe with this inexpensive product. Pack of 6. M 7252

HPM

$3.95

Shocksafe Switch

The shocksafe safety plug-in switch RCD (Residual Current Device) is for use with existing appliance in the home. Shocksafe simply plugs into any powerpoint, detects the first sign of earth leakage and cuts the power off in less than 30 milliseconds. M 7292

KAMBROOK

NEW FOR '99

$27.50

Safety Switch and Cord

Attach this to your drill, electrical garden tools etc for protection from power faults. Prevents electrocution by cutting off your power before the fault does any damage and ensures the power stays off until you press the restart button. A blue button indicates when the unit has tripped on an earth fault. With 1.6m lead. M 7294

HPM

$89.95

Shock Safe Board

NEW FOR '99

A shocksafe outlet power board with an RCD (Residual Current Device) and 1 metre cord. Prevents fatal electrocution by cutting off power within 30 milliseconds. M 7299

KAMBROOK

EXCLUSIVE TO Power House & direct link

$39.95

240V Infra-red Remote Switch

Switch on your appliances up to 15m away. Ideal for the elderly or disabled. M 7215

HPM

$44.80

Auto Night Light NL900

With photoelectric eye this allows automatic turn-on at dusk and off at dawn to save electricity. M 7516

$8.75

ARLEC

Night Lights

MoonGlow Night Lights Assorted

HPM

Feature sift comforting glow to safely light bedrooms, hallways, stairs, bathrooms, caravans and anywhere a night light is required. Inexpensive to run – cost less than 20 cents a year. Advance materials do not generate heat and no globes to replace. M 7240

NEW FOR '99

Happy Light	M 7241
Snuggles Bear	M 7242
Starlight	M 7243

$16.95 ea

Dick Smith Electronics

Powerpoints

NEW FOR '99

Various design with removable face plate

1 way standard	M 7712	$9.95
2 way standard	M 7732	$13.80
1 way extra switch	M 7713*	$13.95
2 way skirting board	M 7715*	$15.70
2 way extra switch	M 7714*	$17.50

Light Switches

NEW FOR '99

Wall mounted, multiple gang.

1 gang	M 7736	$7.40
2 gang	M 7737	$9.40
3 gang	M 7730*	$11.40
4 gang	M 7733*	$13.40
5 gang	M 7734*	$15.40
6 gang	M 7735*	$17.40

Architrave Lightswitch

NEW FOR '99

1 gang	M 7738	$6.95
2 gang	M 7739	$8.95
3 gang	M 7751*	$10.95
4 gang	M 7752*	$12.95

*EXCLUSIVE TO POWER HOUSE & direct link

Mounting Blocks

NEW FOR '99

Mounting blocks suitable for all power points and light switches.

122 x 76 x 12mm	M 7745	$3.50
122 x 76 x 30mm	M 7742	$3.90

Plaster Wall Board Clip

NEW FOR '99

Allows flush mounting of wall plate switches, power points, etc on cavity walls. Eg. Plaster, timber (not brick). Suits 6.4mm thickness.

M 7740 **$2.25**

Junction Boxes

NEW FOR '99

Plastic junction boxes with a screw-down cover.

Standard	M 7748	$5.20
Large	M 7749	$5.80

Upside-down Adaptor

NEW FOR '99

Ever experience trying to fit a power adaptor, in a power point near the skirting board in the kitchen? This product allows you to convert the socket 180° in the other direction.

M 7710 **$6.95**

Bayonet Light Socket

NEW FOR '99

Suits bayonet globes. Plugs into standard light sockets.

M 7725 **$3.60**

Safety Lampholder

NEW FOR '99

White in colour. 250V safety lamp holder.

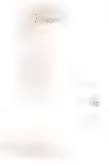
M 7726 **$4.95**

Pushbar Switch

NEW FOR '99

Lampholder fits standard 10A cord and pushbar switch for standard lamps.

M 7727 **$11.95**



Battenholder BC Light Socket

NEW FOR '99

Batten mount from standard Bayonet cap globes. Fixed position.

M 7729 **$5.70**

Light Switch

Ideal for standard lamps etc. Simply wires into power cord. Rated at 10amps.

M 7056 HPM **$12.80**

HPM

Powerpoints

Produces one or more power outlets for plug-in use.

Surface mount socket 56mm	M 7030	$7.95
Surface mount socket 65mm *NEW*	M 7069	$8.40
1 way powerpoint HPM	M 7012	$12.90
2 way powerpoint HPM	M 7032	$19.95

4 Way Powerpoint

Produces four plug-in power outlets.

M 7011 **$39.95**

HPM

Light switches

Wall mounted for turning lights on.

Architrave wall switch HPM	M 7038	$7.50
Standard wall switch HPM	M 7036	$9.95
Double architrave light switch *NEW*	M 7039*	$13.50
Double standard light switch *NEW*	M 7037*	$14.95

*EXCLUSIVE TO POWER HOUSE & direct link

HPM

Mounting Blocks

For mounting switches and boards. Suits single gang architrave switch.

M 7043 **$3.90**

3 Pin Plug

10 amp, 3 pin plug with collar to hold cable.

White HPM	M 7000	$3.40
Clear HPM	M 7002	$3.40
Grey *NEW* HPM	M 7007	$3.40
Side entry grey	M 7006	$3.80
Side entry white *NEW*	M 7013	$3.80

Line Sockets

10 amp, 3 pin in line socket for extension cords etc.

Grey *NEW* HPM	M 7019	
Clear HPM	M 7021	
White HPM	M 7018	

$7.95 ea

15 Amp Plug & Socket

15 amp, 3 pin plug and socket

Plug	M 7010*	$4.95
Socket	M 7024*	$11.95

HPM

NEW FOR '99

*EXCLUSIVE TO POWER HOUSE & direct link

Switch Plates

Blank	M 7046	$4.95
2 gang	M 7053	$4.95
25 pin double	M 7054	$7.95

Light Dimmer

With wall or architrave plate.

Standard	M 7057
Architrave	M 7058

$16.50 ea

Why buy a charger?

Recharging batteries can save you a fortune and helps the environment. Rechargeable batteries can be charged up to 1000 times. Choose from our great selection of chargers that have various features and work at a variety of speeds

Plug-In NiCad Battery Charger

For devices that allow an external charger to be plugged in for easy recharging without removing batteries, eg some recorders and personal stereos. Recharges 7.2-12V battery packs (Not 9V 216 types).

M 9617

$24.75

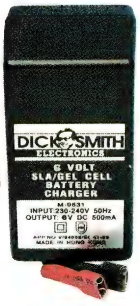
9.6V NiCad Battery Charger

This low-cost battery charger will charge up your 9.6V battery packs in 2.5 to 3 hours. It includes a connector to suit our S 3313 battery pack.

M 9618

$25.50

6V Battery Charger

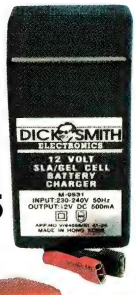


@500mA. Can be left running continuously for ease of use. Ideal for charging sealed lead-acid and gel-cell type batteries.

M 9431

$29.95

12V Battery Charger



@500mA. Can be left running continuously for ease of use. Ideal for charging sealed lead-acid and gel-cell type batteries such as those used in burglar alarms.

M 9531

$36.95

6V/12V 1A charger with alligator clips

NEW FOR '99

Ideal for charging sealed lead-acid and gel-cell type batteries.

M 7521

DSE

$39.95

*Batteries not included

NiCad/NiMH Cabinet Charger and Discharger

NEW FOR '99

An economical charger that is ideal for the most common NiCad and NiMH batteries. Charges up to 2 or 4 'AAA, AA, C, D' batteries or up to 2 x 9V cells.

M 9503

$22.30

5 Hour Fast Charger

Just slot the batteries in the quick charger then plug the charger into any mains socket. Charges 2 or 4 'AA', 'AAA' NiCads, or 1 or 2 x 9V cells. Features indicator LED for each compartment.

M 9507

$29.95

NiCad/NiMH Fast Plug-in Charger

NEW FOR '99

Charges up to 4 'AA' or 'AAA' or up to 2 x 9V cells. Will charge in five hours NiCad & eight hours NiMH.

M 9502

$31

2Hr Automatic Battery Charger

Charges 2 or 4 'AA' NiCad batteries. Fully automatic operation with automatic discharge before charging. Timed 2-hour fast charge and pulse trickle charge. Minimises 'memory effect' to maximise NiCad life. LED status indication. Reverse polarity protection.

M 9500

$36.50

Charging Cabinet For 'AA, AAA' & 9V!*

Charges up to 8 'AA' or 'AAA' NiCads or up to four of these plus 2 x 9V cells. An economical charger that is ideal for the most common NiCad batteries. The slimline charger has an LED indicator for each compartment, just plug it into the mains.

M 9508

$33.50

NiCad Charger

NEW FOR '99

Charges two or four 'AAA, AA, C, D' or up to two 9V size batteries.

M 7486

ARLEC

$34.95

EXCLUSIVE TO POWER HOUSE & direct link

NiCad/NiMH Fast Cabinet Charger

NEW FOR '99

Charges up to 4 'AA' or 'AAA, C, D' or up to 2 x 9V cells. Will charge in five hours Nicads & eight hours NiMHs.

M 9501

$43.60

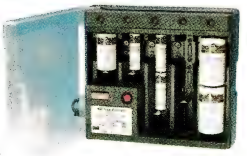
5 Hour Charger Cabinet

Fast charges 2 or 4 'AAA, AA, C or D' NiCad batteries in five hours, or up to 2 x 9V batteries in 10 hours. With automatic cut-off and trickle charge to prevent self-discharging, this charger has an LED charge status indicator and reverse polarity protection.

M 9504

$44.50

Universal Charging Cabinet

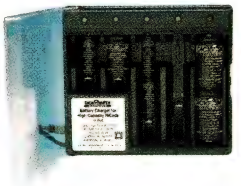


Charges from 1 to 8 'AAA, AA, C' and 'D' batteries* in almost any combination. It will even charge up to 3 x 9V batteries at once. Features include indicator lights for each compartment plus a test meter.

M 9505

$49.95

High Capacity Battery Charger



Charges up to 8 high capacity NiCad batteries* at once in almost any combination. Charges 'AAA', 600mAh 'AA', 1,8Ah and 2Ah 'C', 4Ah 'D' cells and up to 4 x 9V at their correct rates. Includes indicator lights.

M 9506

$54.95

12V 4A Battery Charger

Get the most out of your batteries with this charger! Featuring a battery condition analyser function and offers short circuit protection. Complete with strong flame-retardant case.

M 9805 ARLEC

$49.95

Auto/Boost 6A Battery Charger

A rugged battery charger with an easy-to-read LED display, perfect for 12V batteries used in cars, caravans and boats. It has an automatic charging mode to hold batteries to full charge and a condition analyser function.

M 9806 ARLEC

$84.50

ALL NEW FOR '99

Voltage Converters

Adaptor 24/12V – 4.5V

Converts 24volt or 12volt input to 4.5V @ 0.7A. Allows for the unit to plug into cigarette lighters of cars and trucks that are 24 volts or 12 Volts. Supplied with an assortment of plugs.
M 9687

$19.95

Adaptor 24/12V – 6.0V

Converts 24volt or 12volt input to 6.0V @ 0.7A. Allows for the unit to plug into cigarette lighters of cars and trucks that are 24 volts or 12 Volts. Supplied with an assortment of plugs.
M 9688

$19.95

Adaptor 24/12V – 9.0V

Converts 24volt or 12volt input to 9.0V @ 0.7A. Allows for the unit to plug into cigarette lighters of cars and trucks that are 24 volts or 12 Volts. Supplied with an assortment of plugs.
M 9689

$19.95

Adaptor Multi-Voltage 800mA

1.5, 3, 4.5, 6V @ 500mA 7.5, 9, 12V @ 800mA. Simply plugs into a car cigarette lighter socket and allows you to switch voltages to run a large range of battery-powered devices. Has selectable polarity and is supplied with an assortment of plugs.
M 9683

$25.50

Adaptor Multi-Voltage 1500mA

Converts car voltage 1.5, 3, 4.5, 6, 7.5, 9, 12V. @ 1.5A Auto. Simply plugs in to the car cigarette lighter and allows you to switch voltage. Also allows you to change the angle of the device for better convenience.
M 9682

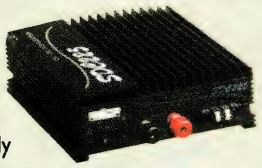
$34.95

Converter 24V DC to 12V DC @ 2AMPS

Converts 24volts to 12volts DC with a 7amp surge. Gives 13.8V @ 2 amps DC continuously (7A surge rating) from a 24V supply. This sturdy regulated supply is ideal for running CBs and stereo systems in trucks with 24V systems (some caravan parks also supply 24V).
M 9813

$69.95

Converter 24V DC to 12V DC @ 20AMPS



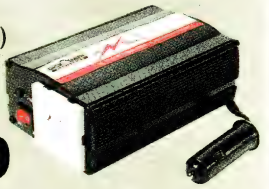
Converts 24volts to 12volts DC with a 25amp surge. Gives 13.8V @ 20 amps DC continuously (25A surge rating) from a 24V supply. This sturdy regulated supply is ideal for running CBs and stereo systems in trucks with 24V systems (some caravan parks also supply 24V). M 9814

$155

Inverters

Plug this inverter into the cigarette lighter socket in your car (or any 12V power source) to provide a 230V AC power for most electrical equipment. Great for smaller televisions and VCRs, personal computers, small kitchen appliances in remote locations. Has overload electronics and temperature shut-down.

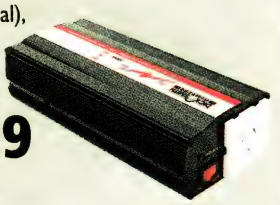
12V – 240V 150W Inverter



DC Input Voltage: 10.7 – 14.5V (12V nominal)
Output Frequency: 50Hz
Output Power: 160W (surge)
150W (cont. @ 13.8V)
Weight: 700g
M 5100

$149

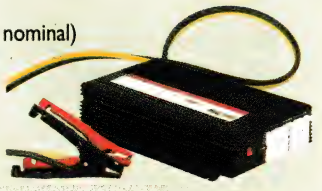
12V – 240V 300W Inverter



DC Input Voltage: 10.5 – 14.5 (12V nominal),
Output frequency: 50Hz
Output Power: 310W (surge),
300W (cont. @ 13.8V)
Weight: 900g
M 5101

$229

12V – 240V 800W Inverter



DC Input Voltage: 10.7 – 14.5V (12V nominal)
Output Frequency: 50Hz
Output Power: 1000W (surge)
800W (20 mins)
650W
(cont. @ 13.8V)
Weight: 1.1kg
M 5102

$469

Inverter 12V-240V 150W Inverter

Enjoy the convenience of household AC power where you want it. Just plug into car cigarette lighter socket.
M 5017

STATPOWER EXCLUSIVE TO POWER HOUSE & direct link

$199

Inverter 12V-240V 225W Inverter

Plug into your car cigarette lighter to run small hand tools, office equipment and entertainment products.
M 5018

STATPOWER EXCLUSIVE TO POWER HOUSE & direct link

$349

12V-240V 300W Sinewave Inverter

12volt input 240volt AC output.
With 1 metre battery lead for true Sinewave.
M 5050

$799

DC Supplies

9V DC @ 200mA
Suitable for equipment that uses 9V DC with 3.5mm plug (tip positive).
M 9614
$15.95

9V DC @ 200mA
Suitable for equipment that uses 9V DC with 3.5mm plug (tip positive). Bulk units in white box.
Scoop purchase, limited stock.
M 9614A
$9.95
NEW FOR '99
EXCLUSIVE TO direct link

9V DC @ 600mA
With multi-way output adaptor and selectable polarity.
M 9560 **$32.95**

12V DC @ 1 Amp
Offers selectable polarity and is supplied with a multi-way output adaptor.
M 9670 **$33.50**

12V DC @ 1 Amp & Female Cig Socket
Allows you to plug in devices that use car cigarette lighter sockets.
M 9671 **$36.95**

24V DC @ 1.5 Amp
Offers selectable polarity and is supplied with a multi-way output adaptor.
M 9636 **$49.95**

AC Supplies

9.3V AC @ 1 Amp
Supplied with 2.1mm and 2.5mm plugs.
M 9653
$25.50

12V AC @ 500mA
For a wide range of household appliances. Supplied with 2.1mm plug.
M 9655
$25.50

12V AC @ 1 Amp
Supplied with 2.1mm and 2.5mm plugs.
M 9656
$29.50

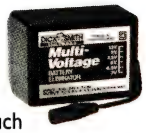
16V AC @ 1 Amp
For alarm panels, small TVs and some answering machines. Without output plug.
M 9667
$22.50

16V AC @ 1.5 Amp
Suitable for small TVs, Keyboards etc where power demands are heavy. With 2.5mm plug.
M 9668
$26.50

24V AC @ 1.5 Amp
Is supplied with a multi-way output adaptor.
M 9635
$39.95

Multi Voltage Supplies

3-4.5-6-7.5-9-12V DC @ 300mA
Versatile supply for around the home and workshop. Includes selectable polarity and multi-way output adaptor.
M 9626
$26.95



3-4.5-6-7.5-9-12V DC @ 500mA
Ideal for products such as battery powered TVs and toys with multi-way output adaptor and selectable polarity.
M 9627
$31.50

Regulated 3-4.5-6-7.5-9-12V DC @ 500mA
Regulated adaptor designed for use with voltage sensitive equipment that needs the voltage to remain constant, even at maximum load.
NEW FOR '99
M 9727
$34.95

6-7.5-9-12V DC @ 1 Amp
Similar to M 9627 but offers 4 voltage selections to a maximum of 1 amp.
M 9628
$35.50

3-4.5-6-7.5-9-12V DC @ 850mA Regulated
Regulated adaptor designed for use with voltage sensitive equipment that needs the voltage to remain constant, even at maximum load.
M 9632 **$42.95**
NEW FOR '99
EXCLUSIVE TO POWER HOUSE & direct link

6-7.5-9-12V DC @ 1.2A regulated
Regulated adaptor designed for use with voltage sensitive equipment, which needs the voltage to remain constant, even at maximum load.
M 9633 **$52.95**
NEW FOR '99
EXCLUSIVE TO POWER HOUSE & direct link

AC/DC Accessories

Packet of 8 Adaptor Plugs
Male: 2.5,3.5
Female: 0.7, 1.7, 3.5, 5, 5.5
M 9600
$8.75

Voltage Adaptor Extension
2-metre long lead.
M 9601
$5.45

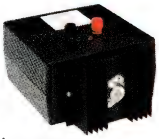
13.5V DC @ 1Amp
Scoop purchase! Hurry While Stocks Last.
M 9820
$10
NEW FOR '99
EXCLUSIVE TO POWER HOUSE & direct link

Communication Supplies

3-6-9-12V DC @ 0.9A Regulated
Ideal for home alarms, intercoms and the workshop. Has simple screw terminal connection.
M 9630
$39.95

13.8V DC @ 1.5A Unregulated
Ideal for portable TVs and car radios. Power rating: 13.8V DC at 1.5A. (18V max)
M 9544
$49.95

13.8V DC @ 1.5A Regulated
Ideal for CBs, ar stereos and small amateur transceivers (particularly hand-helds).
M 9545
$86.95



13.8V DC @ 4A Peak
3A, (or 4A @ 75% duty cycling) continuous and 8A instantaneous peak rating. Just the thing for 2m of small HF amateur transceivers, or as a bench supply.
M 9547
$125

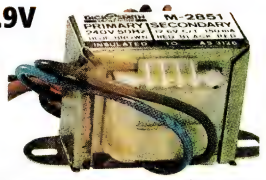
General Purpose AC/AC

9V CT @ 1.4VA

Secondary output:
4.5-0-4.5V
Secondary current:
150mA
Dimensions:
31(h)x37(w)x32(d)mm
Terminations: Flying leads
M 2840
$7.40

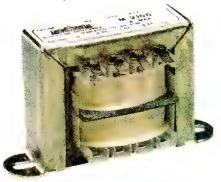
Transformer No 2nd Winding
Scoop purchase, hurry while stocks last.
M 2841
NEW FOR '99

$4.95
EXCLUSIVE TO direct link

12.6V CT @ 1.9V

Secondary output:
6.3-0-6.3V
Secondary current:
150mA
Dimensions:
35(h)x43(w)x36(d)mm
Terminations: Flying leads
M 2851
$7.50

30V CT/36V CT @ 5VA

Secondary output:
18-15-0-15-18V
Secondary current:
140mA
Dimensions:
35(h)x43(w)x42(d)mm
Terminations: Flying leads
M 2856
$9.50

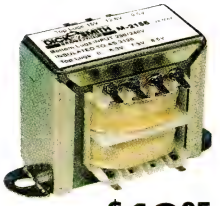
6.3-15V @ 15VA

Secondary output:
0-6.3-7.5-8.5-9.5-12.6
& 0-15V
Secondary current:
1A
Dimensions:
50(h)x61(w)x53(d)mm
Terminations: Solder lugs
M 2155
$12.95

30V CT/15V CT @ 15VA

Secondary output:
15-7.5-0-7.5-15V
Secondary current:
500mA
Dimensions:
50(h)x61(w)x45(d)mm
Terminations: Flying leads
M 2860
$16.95

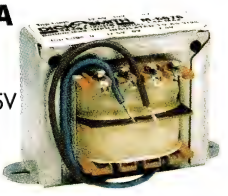
6.3-15V @ 30VA

Secondary output:
0-6.3-7.5-8.5-9.5-12.6 & 15V
Secondary current:
2A
Dimensions:
60(h)x70(w)x68(d)
Terminations: Solder lugs
M 2156
$18.95

12-30V @ 30VA

Secondary output:
0-12-15-17.5-20-24-27.5
& 0-30V
Secondary current:
1A
Dimensions:
60(h)x70(w)x68(d)mm
Terminations: Solder lugs
M 6672
$18.95

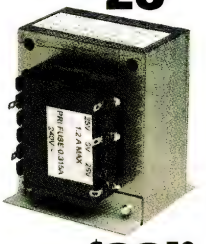
9-24V @ 60VA

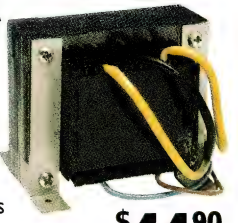
Secondary output:
2 x 0-9-12v
Secondary current:
9V 6.6A, 12V 5A, 15V 4A,
18V 3.3A, 21V 2.9A, 24V 2.5A
Dimensions: 66(h)x79(w)x69(d)mm
Terminations: Solder lugs
M 2165
$26.50

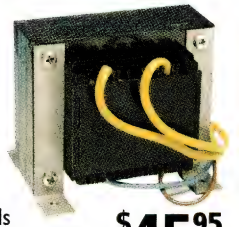
7.5-42.5V @ 60VA

Power ratings: 60VA
Output windings:
0-10-17.5V @ 1.4A, 0-17.5V
@ 1.4A, 0-7.5V @ 1.4A
Dimensions:
66(h)x79(w)x69(d)mm
Terminations: Solder lugs
M 6676
$29.50

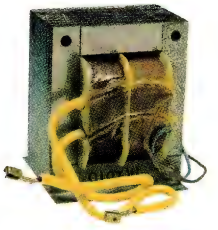
Transformer Multitap 12-30V 2A

Secondary output:
0-12-15-17.5-20-24-27.5 & 0-30V
Secondary current:
2A
Dimensions:
66(h)x79(w)x69(d)mm
Terminations: Solder lugs
M 1991
$28.95

50V @ 60VA

Secondary output:
25-0-25V
Secondary current:
1.2A
Dimensions:
66(h)x79(w)x69(d)mm
Terminations: Solder lugs
M 6680
$33.50

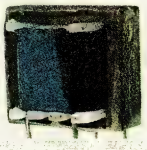
56V CT @ 120VA

Secondary output:
28-0-28V
Secondary current:
2A
Dimensions:
80(h)x96(w)x74(d)mm
Terminations: Flying leads
M 0144
$44.90

18V @ 120VA

Secondary output:
0-18V
Secondary current:
6A
Dimensions:
80(h)x96(w)x74(d)mm
Terminations: Flying leads
M 2000
$45.95

18V @ 300VA

Secondary output:
0-18V
Secondary current:
16.7A
Dimensions:
114(h)x95(w)x95(d)mm
Terminations: Flying leads
M 2010
$99.95

Audio Transformers

Suitable for transistor radio replacements, transistor projects and oscillator circuits requiring coupling transformers.

3kΩ: 3kΩ CT

Primary: 3kΩ
Secondary: 3kΩ
Use: Coupling
Size: 15(h)x17(w)x15(d)mm
Construction: Iron core
M 0222
$2.75

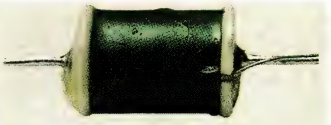
NB: CT = Centre Tapped

1kΩ CT: 8kΩ

Primary: 1kΩ
Secondary: 8kΩ
Use: 350mW output coupling
Size: 11(h)x15(w) x14(d)mm
Construction: Iron core
M 0216
$2.60

Audio Line Transformer

Suits all speaker impedances.
Multi tapped for use
with 100V or 70V lines.
Primary 2.5k, 5kΩ
Output: widings:
2,4,8,16 ohms
Dimensions: 35(h)x62(w)x67(d)mm
Rated: 4W RMS
M 1100
$8.50

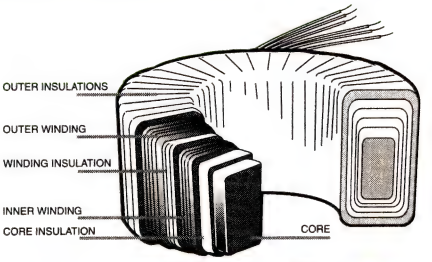


Trigger Transformer
This 240V/6kV transformer
suits Xenon Flashtubes
(P 8164 & P 8166).
M 0104
$1.95

Toroidals Transformers

The Toroidal transformer is now accepted as the standard in the industry, replacing the laminated type. As toroidal transformers offer the advantages in size, weight and lower radiated field.

- Each toroidal is supplied with 2 x Rubber Spacing Washers, 1 x Steel Mounting Bolt and 1 x Nut.
- Smaller size and weight to meet slimline requirements.
- High efficiency enabling rating whilst maintaining size advantages.
- Simple, quick, single bolt mounting.



160VA Toroidal

Cat No.	Volts	Current	Termination	Dimensions	Weight	
M 1605	25/25	3A	Fly leads	112 x 40mm	1.75Kg	$52

300VA Toroidal

Cat No.	Volts	Current	Termination	Dimensions	Weight	
M 1610	28/28	15.3A	Fly leads	115 x 58mm	2.4Kg	
M 1615	40/40	3.75A	Fly leads	115 x 58mm	2.4Kg	$69.95
M 1620	50/50	3A	Fly leads	115 x 58mm	2.4Kg	

Halogen Light Sets

NEW FOR '99

12 Volt Power Adaptor

60VA electronic transformer suitable with halogen lights for projects.

M 8005

$24.95

12 Volt Single Halogen Set

NEW FOR '99

Easy to use Halogen light set simple plug into powerpoint. Comes supplied with 1 x 60VA electronic transformer, 240 Volt mains lead, globe holder and globe.

M 8000

$29.95

12 Volt Triple Halogen Set

Halogen light set simple plug into powerpoint. Comes supplied with 1 x 150VA electronic transformer, 240 Volt mains lead, 3 x globe holders and 3 x globes.

NEW FOR '99

M 8010

$59.95

Axial AC Fans – Reliable AC Motor Construction – Impendance Protection

12cm 240 Volt Rotary Cooling Fan – 120 x 120 x 38mm

Cat No.	Current	Frequency	Input	Speed	Static Pressure	Noise	Type	
Y 8500	0.125A	50Hz	20W	2550 RPM, 85 CFM	0.25 Inch-H20	43dB	Sleeve bearing, including chrome finger guard.	$29.85
Y 8490	***0.125A***	***50Hz***	***20W***	***2750 RPM, 87 CFM***	***0.26 Inch-H20***	***45dB***	***Ball bearing, includes chrome finger guard.***	$35

8cm 240 Volt Rotary Cooling Fan – 80 x 80 x 25mm

Cat No.	Current	Frequency	Input	Speed	Static Pressure	Noise	Type	
Y 8505	0.07A	50Hz	14W	2300 RPM, 17 CFM	0.12 Inch-H20	29dB	Sleeve bearing, including chrome finger guard.	$29.50
Y 8495	***0.07A***	***50Hz***	***14W***	***2450 RPM, 18 CFM***	***0.13 Inch-H20***	***30dB***	***Ball bearing, includes chrome finger guard.***	$34.90

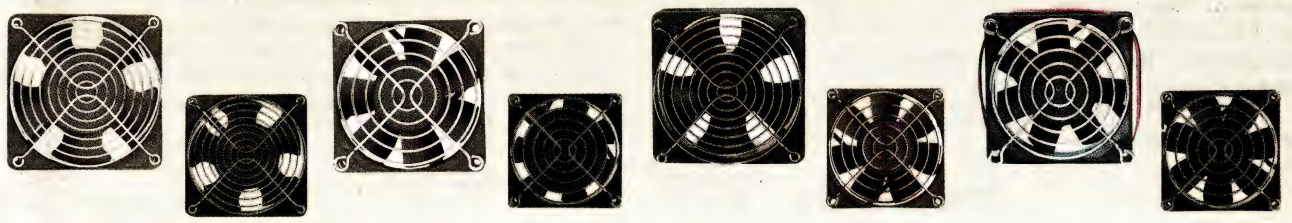
Brushless DC Fans – Brushless DC Motor Design – Polarity Protected

12cm 12 Volt DC Brushless Rotary Fan – 120 x 120 x 38mm

Cat No.	Current	Input	Speed	Static Pressure	Noise	Type	
Y 8509	0.57A	6.8W	3000 RPM, 07 CFM	0.30 Inch-H20	41db	Sleeve bearing, including chrome finger guard.	$32.60
Y 8499	***0.57A***	***6.8W***	***3100 RPM, 108 CFM***	***0.31 Inch-H20***	***42db***	***Ball bearing, including chrome finger guard.***	$35

8cm 12 Volt DC Brushless Rotary Fan – 80 x 80 x 25mm

Cat No.	Current	Input	Speed	Static Pressure	Noise	Type	
Y 8507	0.22A	2.6W	3000 RPM, 41.7 CFM	0.18 Inch-H20	34db	Sleeve bearing, including chrome finger guard	$19.80
Y 8497	***0.22A***	***2.6W***	***3200 RPM, 42.5 CFM***	***0.23 Inch-H20***	***36.5db***	***Ball bearing, including chrome finger guard.***	$23



'Dick Smith Electronics to the Rescue'

Dick Smith Electronics proudly supports the Cronulla Sutherland District Offshore Rescue Boat Service by providing the volunteer unit with first class marine communications equipment. The Offshore Rescue Boat Service is affiliated with Surf Life Saving Australia and advises that all vessels out on the water should be fitted with reliable equipment to make communications with rescue organisations possible at any time. Dick Smith Electronics commends the life saving work of all volunteers involved with the Offshore Rescue Boat Service, which over the past 30 years has carried out over 1055 rescues, 1559 preventative actions and 133 emergency call-outs.

Sea Dolphin Marine CB

Perfect For Small Boating Enthusiasts!

Designed for use in the inshore boating radio service, this marine CB is ideal for small to medium sized boats requiring a simple-to-use transceiver for general in-shore communication. It provides 10 marine channels as well as a switchable noise limiter and noise blanker for reduction of ignition noise, channel 88 (emergency channel) switch, large digital channel display, hand microphone and mounting bracket.

Specifications

Size:	154 x 52 x 192mm (W.H.D)
Transmitter	RF Power Output: 4W max
Receiver	Maximum Sensitivity: 1.0uV
	Audio Output Power: 4W (10% THD)

D 1735

$125

MC-615 VHF Marine

Uniden

The Uniden MC-615 is an easy-to-use VHF marine transceiver which provides a powerful 25W RF output, and covers all 55 VHF marine channels. It is designed to be used in a boat or vessel, but may also be operated as a base station unit with an appropriate power supply and antenna. The MC-615 is sturdy and well-constructed with a corrosion resistant case, and uses a bright LED channel display. Features include an emergency channel 16 switch and selectable 1W low-power switch. The MC-615 is supplied with a mounting bracket, DC power lead, and hand-held microphone.

D 1722

$249

Multi Band Receivers

10-Band Portable Shortwave Receiver

Receives local AM and FM stations (FM stereo with optional headphones) as well as 8 popular international shortwave bands.

Features:

- Bandspread Tuning system for easier station tuning • LED tuning indicator
- Excellent sound reproduction • Solidly built chassis • Sockets for optional headphones and AC adaptor • Soft carry case • Requires 3 x 'AA' batteries
- Compact size just 160 x 85 x 27mm

Shortwave:

2.3-5.0MHz, 5.8-6.2MHz, 7.05-7.5MHz, 9.45-9.9 MHz, 11.55-12.05MHz, 15.05-15.55MHz, 17.45-18.05MHz, 21.45-21.95MHz.

AM: 530-1600kHz

FM: 88-108MHz

D 2834

SANGEAN **$69.95**

Shortwave and VHF Multi-Band Radio

This six-band receiver offers access to shortwave and commercial VHF channels, all 40 CB channels, as well as shortwave and VHF. Plus, with the built-in direction finder, you can plot your position against known AM radio stations. A variable BFO (Beat Frequency Oscillator) also allows reception of SSB marine, shortwave and CB channels. Mains-powered, it requires 4 x 'D' batteries for portable use.

Features:

- Signal Strength meter and Fine-Tuning control
- External antenna socket • AM and FM broadcast bands
- VHF (55-218MHz): TV sound (Ch. 1-10), aircraft, HAM, VHF, Marine
- Shortwave 1(2-6MHz): HF marine, HAM, International SW stations
- Shortwave 2(15- 30MHz): CB, HAM, International SW Stations
- Includes shoulder strap and earphone

D 2832

$149.95

Compact Shortwave Receiver

The Sangean ATS-606 provides direct keyboard frequency entry and 45 memories for accurate Shortwave tuning, plus its Auto Tuning System will even locate the 9 strongest AM and FM stations and memorise them for you. Requires 3 x 'AA' batteries.

Features:

- Automatic Tuning System • 45 station memories
- Comprehensive LCD screen • Scan tuning & Direct keypad tuning
- Dual alarm clocks • Dual time setting • Adjustable sleep timer
- DX/Local sensitivity switch
- Lock switch • Soft carry case
- Stereo earphones for FM stereo
- Antenna socket • Size: 148W x 89H x 30D mm
- Frequency Ranges: FM: 87.50-108MHz LW: 153-513kHz MW: 522-1710kHz SW: 1.715-29.995MHz
- Includes 13 pre-set shortwave bands.

D 2847

SANGEAN **$249**

45-Memory Shortwave Receiver

Catch all your local AM and FM stations plus the fascinating listening on Shortwave from around the world! The ATS-808 provides continuous 150kHz to 30MHz coverage, so you'll catch all the action on the shortwave bands plus medium-wave (AM) bands and, with earphones, FM stereo. You can select wide or narrow filters on SW bands (as well as attenuation for extremely strong stations) to ensure optimum reception quality under differing conditions. Requires 6 x 'AA' batteries or mains adaptor (M 9626 recommended).

Features:

- Keypad frequency entry • Auto-scanning or rotary tuning with fine/coarse control • 45 memories • Dual time settings • Desk stand • Alarm and sleep timer • Keypad and dial tuning locks • Signal strength meter • Narrow/wide IF filters for improved SW reception • External shortwave antenna socket
- Built-in whip antenna • 13 SW band divisions with direct access buttons
- Complete with stereo earphones and protective case

Longwave:	150-519kHz	Mediumwave:	520-1710kHz
Shortwave:	1.711-29.999 MHz (continuous or in 13 pre-set SW bands)		
FM:	87.5-108MHz		

D 2829

SANGEAN **$299**

All-Band World Receiver with Cassette

This professional-quality receiver is very easy to operate with 45 station memories and a large digital display which shows: Frequency, time, signal and battery strength, lock status, alarm status and station memory number. The Sangean ATS-818CS gives you the advantage of being able to record your favourite shortwave or local AM/FM program, or simply play your favourite music tape. Requires 3 x 'AA' and 4 x 'D' size batteries or DC adaptor for mains operation.

Features

• Covers AM/FM, Longwave (150 to 519kHz) and Shortwave (1.711 to 29.999MHz) in 1kHz steps • Dual time display for local and UTC, plus full alarm clock functions • AM wide/narrow IF filters for clearer reception • Pushbutton selection of major SW bands from 120m to 11m • Adjustable RF gain prevents overloading from very strong signals • BFO (Beat Frequency Oscillator) control for receiving SSB and Morse Code signals • Dual conversion design for improved receiver performance • Cassette recorder with chrome tape facility and auto stop

D 2842 SANGEAN **$399**

Portable Shortwave Antenna

Want to boost the performance of your portable shortwave radio? Then you need this wind-up reel-style ANT-60 antenna. It extends to a full 7 metres (23ft), yet fits in a shirt pocket! Connects via a 3.5mm mini plug or the supplied adaptor that clips onto your portable's telescopic antenna.

D 4400

SANGEAN **$24.95**

Sangean ATS-909 Deluxe Shortwave Receiver

Sangean's latest multi-band receiver, the ATS-909 provides professional dual-conversion performance in a package that's easy-to-use, whether at home or while travelling. It provides full AM/FM/LW coverage for reception of local stations, as well as continuous 1.715-29.999MHz coverage for reception of international Shortwave signals, Commercial and Marine traffic, as well as Ham radio and CB transmissions.

HF reception modes includes AM for shortwave broadcasters (1kHz and 5kHz tuning steps), and SSB for Ham, commercial and marine signals with tuning steps of 40Hz and 1kHz.

A total of 306 memories are provided for storing your favourite frequencies (261 on SW, 18 each for MW/FM, and 9 for LW), with battery-free EEPROM memory back-up. Requires 4 x 'AA' batteries for portable use.

Other features include

• Keypad frequency entry • Auto Tuning system for strongest signal location • Narrow/Wide I.F filters for clearer SW reception • FM stereo via earphones • Battery and signal strength indicator • External shortwave antenna socket • Worldtime clock covering 42 cities • Complete with stereo earphones, ANT-60 wind-up antenna, carry case, and AC adaptor.

D 2849 SANGEAN **$399**

YAESU FRG-100 Communications Receiver

Combines the latest microprocessor technology and RF design concepts to achieve a level of performance and ease of operation that you will really appreciate. It provides extended receiver coverage of the 50kHz to 30MHz range in AM, SSB, CW, and FM (optional) modes, as well as a variety of new features.

New features include • Back-lit LCD screen with an impressive array of status indicators • User-programmable tuning steps • 50 tuneable memories (which store frequency, mode and filter setting) • Sharp IF filters for improved SSB reception • Memory group scanning mode • IF bandwidth selection by mode • Twin 12/24 hour clocks • Programmable on/off timer • 16 pre-programmed international shortwave bands • SSB carrier offset function (allows you to customise the receiver's audio performance) • Supplied with detailed instructions and DC cable

D 2790 **2 YEAR WARRANTY**

YAESU **$999**

Specifications

Frequency range:	50kHz-30MHz
Reception modes:	USB, LSB, CW, AM, (FM optional)
Intermediate Frequencies:	1st-47.21MHz, 2nd-455kHz
Image rejection (1.8-30MHz):	60dB or better
Maximum audio power output:	>1.5W into 4 ohms with <10%THD
Antenna impedance:	Lo-Z 50 ohms (unbalanced), Hi-Z 450 ohms (unbalanced)
Supply voltage:	11-14VDC, 1.2A maximum
Dimensions (WHD):	238 x 93 x 243mm
Weight:	3kg (approx)

Sensitivity (10dB S/N, AM/SSB)

Frequency	AM (6kHz)	SSB, CW (2.4kHz)
100-250kHz	<10uV	<4uV
250-500kHz	<2uV	<1uV
0.5-1.8MHz	<4uV	<2uV
1.8-30MHz	<1uV	<0.25uV

Selectivity

Modes	Min -6dB BW	Max -60dB BW
AM	6kHz	18kHz (-50dB)
AM Narrow	4kHz	15kHz (-50dB)
SSB, CW	2.4kHz	4.5kHz
CW narrow (optional)	500Hz	1.8kHz

FRG-100 Keypad

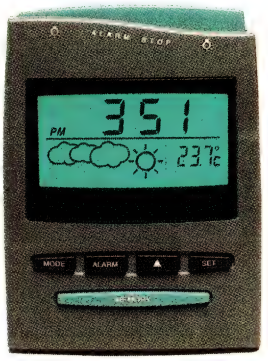
A convenient way to enter frequencies or access memories on the Yaesu FRG-100 receiver. Simply plugs into the CAT socket on the rear of the receiver, and can even remotely turn the receiver on or off. The keypad is powered by the receiver, so no batteries are required.

D 2791 **$129.50**

Mini Weather Station

A convenient way to keep an eye on the weather, at home or at the office. This mini weather station is small enough to fit almost anywhere, and provides an easy-to-follow forecast through the use of display symbols that indicate the likely local weather over the next 12-24 hours. These symbols include sunny, slightly cloudy, cloudy, rainy or stormy. Includes a temperature readout (with min/max memory), switchable 12/24 hour time readout, and a selectable high-efficiency electro-luminescent backlit LCD screen. Requires 4 x 'AAA' batteries.

D 3948



$69.95

Compact Weather Station

Now everyone can keep track of the changing weather patterns with their own home weather station. This stylish unit provides an electronic barometer (with altitude compensation) showing actual barometric pressure plus trends over the last 24hrs, so you can gauge the likely changes in weather, or make use of the weather station's forecast. Also measures indoor temperature and relative humidity. Desk or wall mountable. Measures 108 x 136 x 27mm (W.H.D) and requires 4 x 'AAA' batteries.

D 3952

$139

Deluxe Weather Station

The Deluxe Weather Station features a very large LCD screen for easier viewing and can be either wall or desk-mounted. Provides greater temperature resolution, plus clock (with alarm) and a calendar function, plus selectable C/F temperature and mb/inHg pressure read outs. Other functions include an electronic barometer with 'last 24 hrs' pressure trend graph and direct readout, relative humidity display, and general weather forecast icons. Includes fold out desk stand. Measures 133 x 182 x 26mm (W.H.D). Requires 4 x 'AAA' batteries.

D 3954

$169

Weathalert Weather Data Receiver

The ultimate weather forecaster for boating around Sydney, Melbourne, Brisbane or Adelaide because it utilises the Department of Meteorology weather data via a VHF radio transmission! LCD screen displays the latest forecast and the unit beeps automatically when new forecasts have been received. The number of beeps vary according to updates, warning, or priority data received. Housed in a tough, yellow safety case it operates from just one 9V battery or rechargeable battery (optional). Includes flexible antenna plus full instructions.

D 3940

A DSE scoop purchase! Limited Stocks.

$69.95

Home Weather Stations

Advanced Home Weather Station

This new electronic Weather Station is ideal for use at home or the office as its easy-to-read display helps you understand the changing phases in the local weather and gain a better understanding of what the near future weather will bring. The WM-918 Weather Station lets you monitor the air temperature, relative humidity, dew-point temperature (indoors and outdoors), as well as barometric pressure, wind speed and direction, wind chill, and rainfall rate. This information helps it provide forecast icons for the weather 12-24 hours in advance in a 30-40km radius of its location, so you can plan your outdoor activities – from a picnic to simply knowing when to carry your umbrella.

For more advanced users, the WM-918 provides an inbuilt serial port that allows connection to a PC for monitoring, graphing, and recording of various weather data using optional cabling and software.

The WM-918 is easy to install, and is supplied complete with the Weather station control panel, combined Anemometer and Wind vane, Rain gauge, external temperature and humidity sensor, connection box, cabling, various mounting hardware, WeatherView (basic) software and an AC adaptor. 8 x 'AAA' size batteries are required for operation.

D 3960

$599

WeatherView Software

NEW FOR '99

This enhanced version of the standard WeatherView software program (supplied with the WM-918) allows for the display of the Weather station data in a variety of formats, as well as enhancing the readability of data such as Wind activity. Graphing facilities are provided, with up to 4 graphs on one screen allowing easy comparison of relationships between individual weather parameters. Textual weather forecasts beyond that of the forecast icon on the WM-918 are also provided. Software is supplied on a 3.5" PC diskette.

D 3962

$129.95

GPS Satellite Navigation Made Easy!

What is GPS Navigation?

The Global Positioning System, or GPS, is a US Government satellite-based system initially developed to provide reliable navigational information for military applications. A constellation of satellites orbit the Earth, and their precise time and position transmissions allow a GPS receiver to quickly and accurately compute a position fix anywhere in the world, even where local landmarks are not evident (eg. in a desert or at sea). Used by US forces in operations such as Desert Storm, this form of navigation is highly affordable. Now you too can make use of the GPS satellite signals to help you find your favourite fishing spot, camping site, walking trail or secret hideaway. With the recent rapid progress of computer technology, GPS receivers have become smaller and less expensive, and Magellan can now offer very cost-effective hand-held units for use by adventurers who need reliable navigation information.

Magellan GPS-300 GPS Receiver

Looking for a fun and affordable navigation tool for your outdoor leisure activities, then look no further! The Magellan GPS-300 GPS receiver will show you where you are, guide you where you want to go, and bring you back again. It's small, lightweight, rugged, and boasts waterproof construction plus incredibly easy operation. It's totally self contained, with a sensitive internal antenna and up to 24 hour operation from just 2 x 'AA' alkaline batteries. The GPS-300 provides a clear LCD screen with backlighting for night use, 100 location memories (waypoints), 2 navigation screens, measures 158 x 50 x 33mm (H.W.D) and weighs just 195 grams.

D 3927 MAGELLAN GPS SYSTEMS **$299**

Magellan Blazer-12 GPS Receiver

Featuring a powerful 12-channel parallel receiver for superior tracking in tough conditions, a waterproof casing and a sensitive internal quadrifilar antenna, the Blazer-12 is an affordable navigation tool for outback adventurers that require faster satellite acquisition and better overall performance compared to the GPS-300. Providing 100 waypoint memories and up to 20 hours operation from just 2 x 'AA' alkaline batteries, the Blazer-12 shows speed, distance, time to target as well as a bearing and Cross Track Error indicator.

D 3930 MAGELLAN GPS SYSTEMS **$375**

Magellan GPS-315 GPS Receiver

NEW FOR '99

The new Magellan GPS-315 provides a powerful 12-channel parallel receiver and internal quadrifilar antenna, 500 waypoints, 9 navigation screens plus an internal database of 20,000 world-wide cities, all in a compact waterproof housing with a high contrast back-lit screen. Also provided is a 1200-point SmartTrack function, a resettable Odometer, 10-year lithium battery back-up, NMEA data output and up to 15 hours operation on 2 x 'AA' alkaline batteries.

D 3931 MAGELLAN GPS SYSTEMS **$499**

Magellan ColorTRAK GPS Receiver

Ideal for mariners, the new Magellan ColorTRAK offers an industry first colour screen to help differentiate danger spots, buoy colours, and track history, plus up to 30 hours operation on 4 x 'AA' alkaline batteries. Its oversized screen is also 25% larger than most handheld displays for increased readability, and backlighting is also provided. A highly sensitive 12 channel parallel receiver and detachable quadrifilar helix antenna provide fast satellite tracking and response times. The ColorTRAK provides 500 waypoint memories, 20 routes with up to 30 legs, 9 navigation screens (5 are customisable), a built-in thermometer and altimeter, plus a real-time track plotter.

D 3929 **$796**

Magellan GPS Accessories

Carry Case – Protect your GPS2000/XL or GPS3000/XL from marks and scratches with this handy zippered case.
D 3903 ..... **$34.95**

Swivel Mounting Bracket – A convenient clip-on mounting bracket for the GPS 2000/XL or GPS3000 when used in a boat or vehicle.
D 3901 ..... **$59.95**

External Power Module – Allows easy powering of the GPS-2000 or 3000 from an external 12V DC source in a boat or vehicle.
D 3902 ..... **$99.95**

External Power, Data, Antenna Module – Allows external power and data connection to the GPS-3000/XL only. Includes antenna and cable.
D 3911 ..... **$299.00**

Carry Case – Suit Pioneer, GPS-300, Blazer-12, GPS-315 receiver.
D 3908 ..... **$26.95**

DC Power Cable – Suit Pioneer, GPS-300, Blazer-12, GPS-315 receiver.
D 3907 ..... **$49.95**

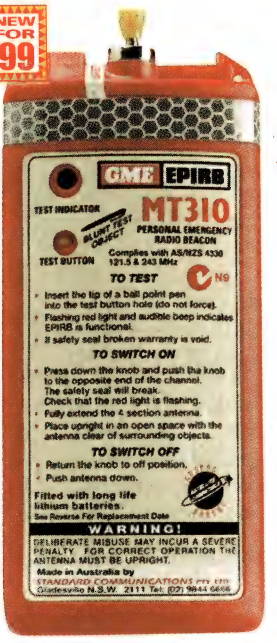
Swivel Mounting Bracket – Suit Pioneer, GPS-300, Blazer-12 receiver.
D 3906 ..... **$49.95**

Mounting Bracket – Suit ColorTRAK GPS receiver.
D 3909 ..... **$99.95**

Cigarette lighter lead – Suit ColorTRAK.
D 3912 ..... **$59.95**

GME MT-310 EPIRB

NEW FOR '99



The MT-310 personal EPIRB (Emergency Position Indicating Radio Beacon) is an Australian made beacon that will, when activated in an emergency, transmit a radio signal that is detected by orbiting satellites, and through the use of Doppler Shift locating techniques, the satellite system can then determine an approximate location. Rescue staff can home in on the beacon signal and effect an appropriate rescue. The MT-310 transmits on 121.5MHz and 243MHz, and its emergency signal is detected by the COSPAS/SARSAT joint US/Russian satellite program. Each MT-310 is factory fitted with a 10 year shelf-life Lithium battery. Satellite detection time of the EPIRB's distress signal varies, but in Australia and NZ the detection time is less than 2 hours, and over half of the Australian continent has a detection time of around 1 hour.

D 1740 GME Electrophone **$269**

Dick Smith Electronics Slimline AM CB

With Voltage Regulator

A very compact 40-channel mobile AM CB with a front panel microphone socket for more convenient vehicle mounting. Unlike most AM CBs, this model uses special voltage regulator technology to maximise transmitter output, so you won't suffer from reduced range due to the lower battery voltages when your car is stationary and the engine is not running. SMA approved, no license required.

• Push-button channel selection • External speaker socket • Transmit and Receive indicators • Just 115mm x 32mm x 162mm (W.H.D)
• Complete with mounting kit and quality microphone

D 1220

$99.95

Compact PRO-510XL AM CB

Very high quality and reliability make the Uniden PRO-510XL a popular choice among avid CBers. At a compact 115 x 35 x 167mm, it offers an uncluttered front panel and high-power audio stage. It can also be mounted under most dashboards with ease. SMA approved, no license required.

• Switchable noise limiter to reduce ignition noise • Front panel mic socket for tight installations • Bright LED channel display • Signal/power output LED meter • Complete with microphone and mounting hardware

2 YEAR WARRANTY

D 1230

Uniden **$119.95**

PRO-520XL Deluxe AM CB

The clean layout of this rugged CB makes it very easy to operate. It comes complete with mounting hardware and quality microphone. SMA approved, no license required.

• All 40 AM channels with switchable emergency Ch. 9 selection • Selectable automatic noise limiter to reduce engine noise • Bright LED channel display • Separate Squelch, RF gain and volume controls • Public address facility (optional speaker required) • LED signal strength/RF meter • Measures 115 x 35 x 172mm.

2 YEAR WARRANTY

D 1235

Uniden **$149.95**

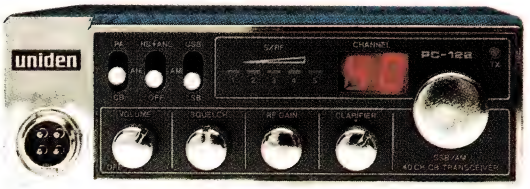
Uniden PC-122 AM/SSB CB

A rugged mobile CB using a space-saving design, the PC-122 fits comfortably in most vehicles, suits many modern dashboards and is SMA approved. With microphone, mobile mounting hardware & instruction manual. Superior features include:

• LED received signal and RF output indicators • Switchable noise limiter for clearer reception • Separate Volume, Squelch, RF gain and Clarifier controls for easier operation • Covers all 40 channels on AM, LSB and USB • PA facility (requires optional speaker) • Measures 153 x 190 x 50mm

D 1715

Uniden **$269**



Uniden Grant XL AM/SSB CB

The Grant XL incorporates handsome styling with a proven design for powerful performance. Its solid construction, great audio quality and adjacent channel rejection, plus dual noise-reduction circuits mean it's right at home in either your vehicle or base station applications. When you're ready for the best in AM/SSB CB communications, step up to the Grant XL.

• Adjustable Mic gain and RF gain allows optimum settings for your application. • Large back-lit meter for signal strength, RF output and antenna SWR. • Noise blanker and automatic noise limiter helps reduce engine & background electrical noise. • Measures 200 x 235 x 60mm
• Includes mic, mounting hardware & detailed instructions.

D 1482

Uniden **$299**

CB Accessories

CB Extension Speaker

Compact 8 ohm extension speaker ideal for most CBs and scanning receivers. Uses a highly-sensitive 5W speaker for clear audio and comes with mounting bracket, screws and a 1.5m lead fitted with a 3.5mm plug.

D 2250

$22.95

Uniden MS-100 CB Extension Speaker

A slimline 5W extension speaker for use where only a small mounting space is available. Comes with flush mounting bracket and lead fitted with a 3.5mm plug to suit most CBs and scanners. Measures 73mm x 66mm x 37mm (W.H.D).

D 2275

Uniden **$29.95**

Mundara SY-201 AM/SSB CB

An amazing new AM and SSB handheld CB, great for communicating with other CB operators. Use the AM mode to talk to local handheld or mobile users, or switch to SSB for much longer range plus less interference and noise. The SY-201 provides full 40-channel operation, a comprehensive LCD screen, Mic gain and RF gain controls for greater flexibility, plus selectable high-low output power. Can be used in a vehicle with the supplied slide-on adaptor. Handheld operation uses optional 'AA' sized batteries, providing up to 6W PEP RF output. ACA approved. No licence required.

D 1275

NEW FOR '99

$399

Mundara Accessories:

Carry Case	D 1276	$16.95
Shoulder Strap for Carry Case	D 1277	$6.95
High Efficiency Antenna (62cm long)	D 1278	$36.95
Speaker/Mic with Gain Control	D 1279	$59.95
Battery Case for 9 x 'AA' batteries	D 1280	$22.95
NiCad Battery Pack 600mA/H	D 1281	$79.95

Universal Dynamic Mic

Especially designed for AM and SSB transceivers, this quality Japanese mic is supplied with a four-core lead and 4-pin plug that can be wired to suit most transceivers, including those with electronic switching. Nominal 600 ohms impedance.

D 2000

$26.95

Stainless Steel Mic Clip

Enjoy easier mobile communications with this lightweight and durable stainless steel microphone clip. Supplied with stainless self-tapping screws.

D 1995

$5.75

CB TVI Filter

This easy to install filter helps reduce interference to both TV and FM radio reception caused by harmonics from CB transceivers. Connected in line with your CB coax antenna lead, it has a cut-off frequency above 30MHz.

D 7086

$19.95

3 Position Coax Switch

If you've got more than one antenna or CB, then this switch is what you need. An easy-to-use slide switch puts an end to your wiring nightmares and makes antenna selection convenient. Handles up to 50W at 30MHz.

D 5206

$22.95

Noise Cancelling Mic

This quality Japanese microphone uses two out-of-phase inserts to achieve its noise-cancelling ability. It has a quality PTT switch and coiled lead making it ideal for amateur or CB use. Impedance is 250-600 ohms and frequency response is 300-5000Hz.

D 2010

$36.95

FM Walkie Talkies

Very high quality walkie talkies with a long range – up to 200m outdoors. These simple to use units operate on the 27MHz band and use FM transmissions for good audio quality. No licence is required and they come complete with a telescopic antenna and carry strap. 9V battery required per unit.

D 1090

digitor $69.95 pr

Headset/Microphone

A lightweight headset/microphone designed to suit the D 1095 and D 1097 55MHz transceivers. Provides improved transmit audio in noisy areas through the use of an Electret microphone and dynamic headphone. Simply plugs into the transceiver in place of the standard earpiece/microphone.

D 2020

$24.95

Long-Range Walkie Talkie

Ideal for first-time users such as sporting clubs, schools, farmers and bushwalkers with no licence required and can provide up to 300m maximum range (line-of-sight). Because it operates on a high 55MHz VHF frequency, you're less likely to experience noise or interference from other transmitters. Complete with a belt clip and an earpiece/tie-clasp microphone which allows handsfree voice-operated transmissions. Frequency of operation: 55.150MHz. Requires a 9V battery.

D 1095

$69.95

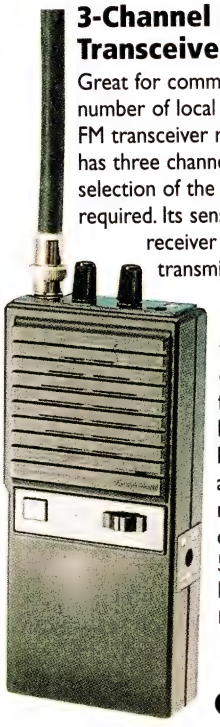
digitor

3-Channel 55MHz FM Transceiver

Great for communicating with a large number of local area users, this 55MHz FM transceiver requires no licence, and has three channels fitted for easy selection of the person or group required. Its sensitive dual-conversion receiver and efficient FM transmitter allow up to 300m range (line of sight), and it comes complete with a belt-clip and earpiece/microphone for voice activated hands-free operation. For easy storage the antenna can also be removed. Frequency of operation: 55.050, 55.150, 55.250MHz. Requires a 9V battery.

D 1097

$89.95



digitor

20 Channel UHF FM Transceiver

Enjoy the clarity and reach of a UHF handheld transceiver at this breakthrough price. This compact 20 channel Digitor transceiver operates on the less crowded 433MHz UHF band, and its battery saving 20mW RF output still provides up to 1km line of sight range during outdoor operation. The crisp FM transmissions are also able to cover large areas indoors, and with no license or air-time costs, this transceiver is ideal for home, small business, and outdoor communications. The Digitor D 1099 also includes CTCSS selective calling so you can silence the receiver until you're called by another D 1099 user that you want to talk to. Operating on 4 x 'AA' alkaline batteries (optional), the D 1099 is supplied with a belt clip and carry strap, as well as detailed instructions.

D 1099

NEW FOR '99 digitor **$149**

Accessories for D 1099

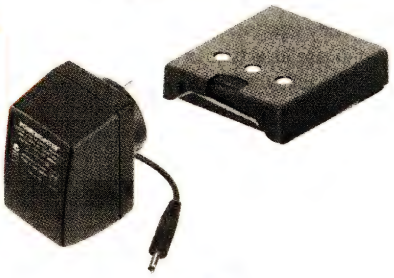
NEW FOR '99

NiCad Battery Pack, 600mA/H.

D 1096 **$26.95**

Mains Charger for Nicad Battery Pack.

D 2741 **$16.95**



Uniden UH-053 UHF CB

Answers the needs of users who require a compact FM transceiver for communication over short to medium range local areas, without the extra complexity and expense of existing high-power hand-helds.

- Covers the first 16 channels of the UHF CB band
- Selectable repeater operation on channels 1-8
- Simplex operation on all 16 channels is selectable if repeater access is not required
- Compact 150 x 41 x 63mm case
- 1 watt RF output
- Fully ACA approved so no licence is required
- Supplied with 600mA/H NiCad battery pack, AC charger, belt-clip & flexible antenna

D 1753

Uniden **$269**

Uniden UH-045 PocketMax UHF CB

NEW FOR '99

Now everyone can affordably talk to other UHF CB users with this compact new handheld transceiver that can provide up to three kilometres outdoor line of sight range. The UH-045 provides 19 channel operation, 400mW RF output, a 38 tone CTCSS Selective calling facility and operates on 4 x 'AAA' sized batteries. A belt-clip and carry strap are included and the UH-045 can also operate on optional NiCad batteries. ACA approved, no license required.

D 1752

Uniden **$199**

Voice Activated Headset Microphone

Exclusive to Dick Smith Electronics! This lightweight Japanese voice-activated (VOX) headset works with the UH-053 and D 1099 transceivers only, providing handsfree transmit operation in quiet areas when you speak. Includes adjustable VOX delay time, manual PTT operation, and foldable headset band. Operates on two watch batteries supplied.

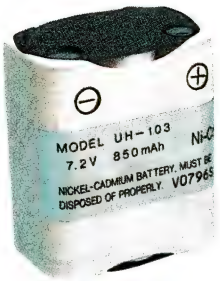
D 2027

$99.95

High Capacity UH-053 Battery Pack

A long life 850mA/H version designed for the UH-053 hand-held UHF CB (D 1753), directly replacing the NiCad battery supplied with the unit and enabling 40% more operating time. Uses existing AC plugpack charger supplied with the UH-053.

D 1825 **$69.95**



Desktop Slow Charger

A great way for regular users of the Uniden UH-053 to charge an extra battery pack overnight. This desktop charger has two ports (one for the transceiver, and a smaller one for the extra supplied NiCad pack), and makes use of the standard UH-053 AC plugpack adaptor.

D 1811 **$99.95**

Mastercharger 1 Intelligent Fast Charger

Suits Uniden UH-053 UHF hand-held, with typical charging times of just 90 minutes. Reverts to trickle-charging once the fast charge cycle has been completed. Comes with an AC power supply for home use and a cigarette lighter lead. Exclusive to Dick Smith Electronics.

D 3853 **$215**

UH-054A Waterproof UHF CB

Compact, waterproof handheld transceiver with full 40 channel coverage, and repeater access facilities. Uses rubber gasket seals, sealed pushbutton controls, a large top-panel mounted LCD screen and a contoured plastic case. Includes a sealed NiCad battery pack, flexible rubberised antenna, rugged spring-loaded belt clip, desk charging stand, carry strap and an overnight AC adaptor charger. Waterproof up to a depth of one foot for 30 minutes. Water impact resistance of 72kph(max). Measures 122 x 63 x 32mm. No license required.

D 1754

Uniden $349

Handheld UHF CBs

These superb CBs from Uniden provide a host of features at budget-pleasing prices. Both the UH-056 and the UH-057 are supplied with a longlife 700mA/h NiCad battery pack, belt clip, AC charger and flexible antenna. Neither requires a licence. SMA approved.

Common features include

- Compact (68 x 37 x 150mm)
- Full 40ch coverage
- Switchable 1W/5W max output
- Channel & priority scanning
- Simplex/duplex operation
- Informative backlit LCD display
- Auto-Squelch system
- Programmable channel scanning
- Battery savers for longer battery life
- Battery-free memory back-up

The UH-057 also includes

- Front panel keypad for direct channel selection
- Selective calling (silent monitoring of channel until you're called or call another party)
- Tone Squelch scanning for locating Selcall activity on multiple channels
- Auto acknowledge system so you know your page has been received
- Call alarm when you are called
- Tone or group calling
- Selcall ID memory

Uniden

Uniden UH-057	D 1757	**$499**
Uniden UH-056	D 1756	**$469**

Leather Carry Cases

A range of durable cases designed especially to protect the UH-056 and UH-057 units (with standard battery packs), as well as the UH-053 model.

UH-056	D 1819	**$69.95**
UH-057	D 1829	**$69.95**
UH-053	D 1820	**$49.95**

Uniden

NiCad Battery Packs

A 700mA/H unit to directly replace standard NiCad packs supplied with the UH-056 and UH-057 CBs, and one that can be trickle charged with the standard charger or fast charged with the optional desktop charger. Also available: an 1100mA/H unit for extended operating times (especially when running high power), rechargeable with optional fast charger only.

700mA/H NiCad pack	D 1815	**$129.95**
1100mA/H NiCad pack	D 1816	**$169.95**

Uniden

Uniden Battery Eliminator

For use with the UH056/7, this battery eliminator replaces the NiCad battery by supplying power from a cigarette lighter socket. Allows 4W RF output from the transceiver.

D 1818

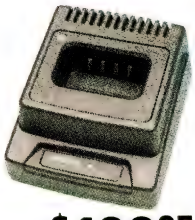
NEW FOR '99

$79.95

Fast Desktop Charger

Designed to suit the NiCad battery packs used with the UH-056 and UH-057 CBs, as well as the HH-979XL VHF handheld unit. Charges in under two hours, and returns to a trickle charge when batteries are fully charged. Includes AC power supply.

D 1817



Uniden

$199.95

Headset/Microphone

A lightweight headset compatible with Uniden UH-053, UH-056 and UH-057 handheld CBs, allowing for more convenient operation in noisy areas. Headset lead features a convenient push-to-talk switch wired into the headset lead.

D 2023

Uniden $69.95

Compact Speaker/Microphone

Provides greater flexibility in mobile or hand-held applications, combining speaker and microphone in one slim unit, allowing the transceiver to be clipped to a belt or carried in a pocket. Plugs into appropriate transceiver sockets and features an easy-to-use push-to-talk button. For use with UH-053, UH-056 and UH-057 handheld UHF CBs.

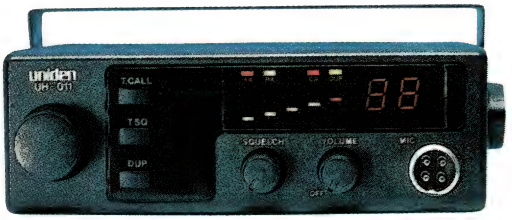
D 2025

$69.95

What Is UHF CB?

UHF CB is the term used to distinguish the 477MHz CB band from standard 27MHz CBs. Hobby and business users of UHF CB enjoy not only the convenience of smaller, more convenient mobile and hand-held units, but also clearer reception and lower noise levels compared to standard CBs. The higher UHF CB frequencies allow good coverage indoors – hand-held operation for in-building use is becoming increasingly common. There are also many UHF CB repeater stations around Australia, greatly extending the range of UHF CB signals and made available for general use without charge. If you are considering an upgrade of your existing CB system, or have a need for short to medium range communications where privacy is not a priority, UHF CB may be ideal. With no airtime or licensing fees, and very reasonable equipment pricing, it offers you cost-effective and convenient communication.

Uniden UH-011 UHF CB



For quality communication and value for money, the Uniden UH-011 offers superb reliability and ease of operation. Serious users will appreciate its host of professional features, including a programmable duplex facility allowing the labelling of selected channels for repeater operation (when the unit is tuned to those channels again, duplex mode is automatically activated). The UH-011 boasts bright LED indicators for TX, RX, CA and duplex operation, as well as an LED bargraph meter for received signal strength and power output. Controls are designed for fast, easy operation, and the UH-011 comes with mobile mounting hardware, quality microphone and Uniden's famous 2 year warranty. License not required. SMA approved.

Specifications

• Channels: 40 • Frequency range: 476.425 to 477.400MHz • Carrier power: 5W max • Voltage: 13.8 DC nominal • Current drain: receiver 600mA, transmitter 1.5A max • Sensitivity: 0.5uV (20db SINAD) • Audio output: 3W max • Dimensions: 155 x 53 x 189 mm (W.H.D.)

D 1766

2 YEAR WARRANTY

Uniden **$299**

Uniden UH-077 Scanning UHF CB

Epitomising excellence in UHF CB communications, the Uniden UH-077 is capable of scanning the entire UHF 40 channel range in a lightning-fast 3 seconds. Its handsome front panel boasts an LED display and colour coded status indicators. With separate volume and squelch controls, this unit also offers advanced features such as group scan (scans only channels you specify), open scan (scans all 40 channels), priority monitoring (listens to one channel while periodically checking another selected channel) and more. Complete with mobile mounting hardware, high-quality microphone and DC power lead. No license required. SMA approved.

Specifications:

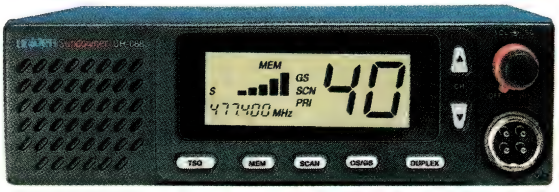
• Channels: 40 • Frequency range: 476.425 to 477.400MHz • Carrier power: 5W max • Voltage: 13.8 DC nominal • Current Drain: receiver 600mA max, transmitter 1.3A max • Sensitivity: 0.25uV for 12dB SINAD • Audio output: 3W max • Dimensions: 155 x 53 x 188 mm (W.H.D.)

D 1777

2 YEAR WARRANTY

Uniden **$349**

Uniden UH-088 Scanning UHF CB



Uniden's latest offering, this mobile UHF CB provides fast channel scanning and a convenient DIN size that is easier to install in today's modern cars. It supports repeater operation, open and group scanning, push-button channel selection, and provides memory back-up for up to 2 weeks in case the DC power is disconnected. Together with the large backlit LCD screen and buttons plus the front fire speaker of the UH-100 model listed below, the UH-088 also provides channel seek (where the receiver will continue scanning after stopping for 4 seconds on an active channel). No license required. SMA approved.

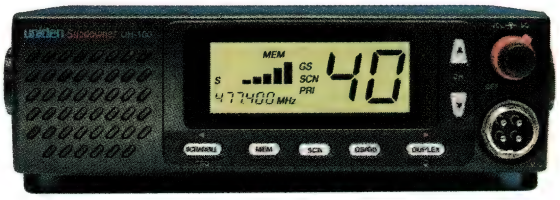
Specifications:

• Frequency range: 476.425 to 477.400MHz (40 channels) • Carrier power: 5W max. • Voltage: 13.8V DC nominal • Current drain: receiver 550mA max, transmitter 1.5A max. • Sensitivity: 0.23uV (12dB SINAD). • Audio output: 3W max • Dimensions: 173 x 52 x 145mm (W.H.D).

D 1785

$369

Uniden UH-100 Deluxe UHF CB



A great new addition to the Uniden range, the UH-100 not only provides voice scrambling for improved privacy during simplex (non-repeater) operation, but also provides scanning facilities (open and group scanning) as well as an advanced programmable selective calling system with 10 memories for commonly called stations. Other features include a front-fire speaker for clearer audio, a large LCD screen with adjustable backlighting to account for different ambient light levels, individual and group calling facilities, plus tone squelch scanning. Complete with mobile mounting hardware, quality microphone with call button, and DC power lead. SMA approved, no license required.

Specifications:

• Frequency range: 476.425 to 477.400MHz (40 channels) • Carrier power: 5W max • Voltage: 13.8V DC nominal • Current drain: receiver 550mA max, transmitter 1.5A max • Sensitivity: 0.23uV (12dB SINAD) • Audio output: 3W max • Dimensions: 173 x 52 x 145mm (W.H.D.)

D 1788

Uniden **$399**

Yaesu FT-920 HF/6m All-Mode Transceiver

Now there's no excuse for not taking advantage of the latest advances in Digital Signal Processing, transceiver design, plus the fun of 6m operation. The stunning Yaesu FT-920 is a high performance HF/6m multi-mode transceiver that provides 100W PEP output on the 160m-6m bands, incredible front-end performance based on the FT-1000MP design, and a huge array of new features that make it a pleasure to use. At first glance Yaesu's renowned Omni-Glow LCD screen is obvious, and its wide-angle view provides a wealth of information about the transceiver's operating status, with multi-function metering and an enhanced tuning scale for DSP bandwidth, CW tuning, FM discriminator and more. Inside, the FT-920 is built around a rugged diecast unibody chassis which provides excellent heatsinking for the dual MRF255 160m-6m FET power amplifier. Yaesu's engineers dedicated themselves to enhancement of real-world signal to noise ratios, and after thousands of hours of design and testing have produced an industry-leading 33.3MIPS (millions of instructions per second) processing speed DSP that provides a two-parameter noise reduction system with 32 steps of adjustment, dual-control DSP passband tuning, DSP auto notch filter, an amazing new Digital Speech Processor, DSP mic equalisation, fast acting DSP VOX circuitry, as well as a contest-ready digital voice recorder!

Other features include an all-band (160m-6m) auto antenna tuner which also works on receive, Direct Digital Synthesis for clean local oscillators, frequency-optimised front-end preamps, shuttle-jog tuning ring, dual watch receive system to watch for band openings, 127 memories with Alphanumeric labelling, IF Shift and IF noise blanker, plus an extensive menu system for 'set and forget' functions. The FT-920 is supplied with an MH-31B8 hand mic, DC power lead, and comprehensive instruction manual.

D 3420 **2 YEAR WARRANTY**

YAESU $2995

Yaesu FT-1000MP Deluxe HF All Mode Transceiver

Built upon the legendary performance of the FT-1000, Yaesu has created a new 100W HF masterpiece using proven design techniques and the introduction of a major new technology to the Amateur marketplace: Enhanced Digital Signal Processing (EDSP). Teamed up with Direct Digital Synthesis, an outstanding receiver section featuring a high intercept front-end and a variety of IF filters (including a Collins Mechanical Filter), the FT-1000MP's exclusive EDSP facilities provide an impressive array of IF-based noise-reduction and interference reduction filters for enhanced receiver performance, as well as flexible tailoring of the transmitter for outstanding signal clarity.

Yaesu's IF-based EDSP system provides 4 random noise-reduction protocols, audio enhancement with 4 equalisation programs for Tx and 3 for Rx, and an automatic notch filter which identifies and eliminates multiple interfering carriers. A comprehensive menu system allows you to easily hear the effect of various EDSP settings, so you can choose the best selection for your operating conditions. Front panel selectable EDSP filter contours also aid QRM rejection, providing improved signal-to-noise ratios and razor sharp selectivity. The FT-1000MP also features selectable receiver front-ends, an inbuilt AC power supply and auto antenna tuner, 2 main antenna sockets, selectable tuning steps as small as 0.625Hz, dual-mode noise blankers, 13.8V DC socket, 500Hz and 6kHz IF crystal filters, an RS-232 computer interface, and an MH-31B8 hand microphone. With so many features in this new transceiver, why not ask for a copy of the 12-page FT-1000MP colour brochure, or 46 page Technical Overview for more detailed information.

D 3400 **2 YEAR WARRANTY**

YAESU $4450

Yaesu and Dick Smith Electronics – a great support combination

As the factory authorised distributor of Yaesu Amateur equipment in Australia for nearly two decades, Dick Smith Electronics is also proud to provide the support services to take care of the Yaesu equipment you have purchased from us, now and in the future.

Our Sydney Service Department carries a huge range of Yaesu spare parts, accessories and manuals, and for those unusual occasions where we may not have a specific Yaesu part in stock to suit a product we have sold, we have full access to Yaesu's extensive parts facility in Japan. If the part is available we can order it in for you (excluding some items such as power supplies due to legal restrictions). So when you next need a part for your Yaesu transceiver, simply call our Sydney Service Department (Spare parts section) on Ph (02) 9937 3311 to obtain pricing and availability information.

In the unlikely event that a repair to your Yaesu gear is required, our well equipped and experienced service technicians can provide servicing of most modern Yaesu amateur transceivers as well as support of many older models where parts are still available. Don't risk your precious equipment to an unauthorised servicing outlet... only Dick Smith Electronics has the trained staff, parts and technical resources to properly service the Yaesu Amateur equipment that we sell!

What's more, you can drop off your equipment (securely packed) at your nearest Dick Smith Electronics store and we'll arrange (and pay for) transport to and from our Sydney Service centre. Some conditions do apply (such as acceptable packaging and a non-warranty lodgement fee), so if you have any servicing needs, please contact your nearest store or our Sydney Service Centre on Ph (02) 9937 3377 for more information.

YAESU

Yaesu FT-840 HF Mobile

An ideal first rig for home or vehicle use, the economical Yaesu FT-840 covers all HF bands from 160-10m with 100W PEP output, and provides continuous receiver coverage from 100kHz to 30MHz.

The FT-840 provides:

- SSB/CW/AM operation (FM optional)
- 100 memory channels, two independent VFOs per band
- Large back-lit LCD screen, uncluttered front panel
- Effective noise blanker
- Variable mic gain and RF power controls
- SSB speech processor for greater audio punch
- IF Shift & CW Reverse to fight interference
- Dual Direct Digital Synthesisers for cleaner TX/RX operation
- Compact case size of just 238 x 93 x 243mm (W.H.D)

D 3275 **2 YEAR WARRANTY**

$1595

FM Module suit FT-840 D 2932 **$109.95**

YAESU

Yaesu FT-100 HF/6m/2m/70cm Mobile

What amazing value! Now you can enjoy the fun of operating on all bands from 160m to 70cm, either at home or in your car. The new Yaesu FT-100 features HF/6m/2m/70cm transmitter coverage, with 100W PEP RF output on HF and 6m, 50W on 2m and 20W on 70cm, plus you can easily mount the detachable front panel using an optional lead for more convenient mobile installations. Powerful interference fighting features such as a DSP based Bandpass filter, Notch filter and Noise reduction, together with an IF based Shift control, all aid reception quality during tough conditions. A speech processor and VOX are provided for SSB users and an internal Electronic keyer is provided for CW operation. Also included are dual VFOs, built-in CTCSS encode, 300 memory channels, all-mode operation (SSB, CW, AM, FM, AFSK, Packet (1200/9600bps)), 100kHz – 970MHz receiver (cellular locked-out) and options for additional AM and CW IF filters. The FT-100 is supplied with an MH-42B6JS hand mic, DC power lead and comprehensive instructions.

D 3285 **2 YEAR WARRANTY**

$2750

YSK-100 Separation Kit D 3286 **$155**

NEW FOR '99

YAESU

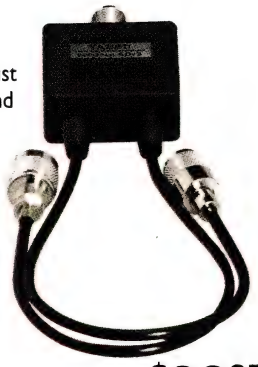
Yaesu FT-847 HF/6m/2m/70cm DSP SatelliteTransceiver

Only one transceiver gives you all-mode operation on the HF, 6m, 2m and 70cm bands with full satellite capability... the new Yaesu FT-847 'Earth Station'. Ready for action on SSB/CW/AM/FM and Digital modes, the FT-847's compact size makes it ideal for a variety of portable/mobile applications as well as for serious base station operation. You get solid 100W PEP output on the HF and 6m bands, and 50W output on both 2m and 70cm, with dual fan cooling and a rugged diecast chassis. Plus, the ultra-quiet HEMT receiver pre-amps on 2m and 70cm contribute to the FT-847's amazing sensitivity. Advanced Digital Signal Processing (DSP) circuitry enhances received signal/noise ratio for easier copy of signals under marginal conditions through the use of 16 selectable noise reduction algorithms, while the Bandpass and Auto-notch filters aid the IF based Shift and Noise Blanker to help reduce interference on crowded bands. The FT-847 is satellite ready with crossband full duplex operation, normal and inverted VFO tracking, as well as 12 special satellite memories. Also provided is a low-noise Direct Digital Synthesiser (DDS) that provides tuning steps as small as 0.1Hz, adjustable DSP Bandpass filters as narrow as 25Hz for weak-signal CW reception, and a facility to install optional Collins mechanical filters in both the transmit and receive chain for SSB operation. An RF-style speech processor with adjustable frequency shift voice tailoring is also provided to add punch to your SSB signals. The FT-847 is ready for data modes, with a rear panel data in/out socket and a packet socket for 1200/9600 baud VHF/UHF operation. Other features include extended receive operation (37-76, 108-174, and 420-512MHz), a high-speed computer control interface, 10 key keypad for band/frequency entry, and a Shuttle-Jog tuning ring for fast QSY. The FT-847 is supplied with a hand-mic, DC power lead and a comprehensive instruction manual. Call us for a copy of Yaesu's 6 page colour brochure to learn more about this incredible value 'Earth Station' transceiver.

D 3425 **2 YEAR WARRANTY**

$3250

AD-3 Antenna Duplexer



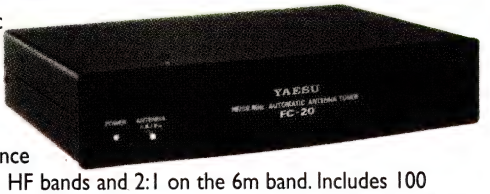
Allows connection of a 2m and 70cm transceiver to a dual-band antenna through just one coax run. Can also be used with dual-band transceivers that have separate 2m and 70cm outputs. Maximum power rating is 100 watts and isolation between outputs is approximately 55dB.

D 3303

YAESU

$99.95

FC-20 Antenna Tuner



An external automatic HF/6m antenna tuner to suit the Yaesu FT-847 and FT-100 transceivers. It will accommodate impedance matching up to 3:1 on HF bands and 2:1 on the 6m band. Includes 100 memories to store tuning data.

D 3428

YAESU **$649**

SP-8 Deluxe Desk Speaker

Styled to suit the FT-1000MP, the SP-8 provides a large speaker and selectable audio low and high pass filters with a choice of 12 different filtering combinations. It has 2 inputs with front panel selection, and 2 headphone sockets with filtered audio output. Can be used with almost any transceiver or receiver for improved audio.

D 3410

YAESU **$269**

Yaesu SP-4 Extension Speaker

Has a built-in switchable noise filter and comes with a swing-mounting bracket. It handles 3W at 8 ohms and looks smart alongside any RF rig. Comes complete with lead and 3.5mm mono plug.

D 2300

$39.95

YAESU

Transmitter Low-Pass Filter Medium Power

Reduces TV interference caused by HF transmitters. Ideal for CBers and amateurs, it handles up to 500W PEP. Cut-off is around 30MHz with a maximum attenuation of approximately 50dB at 100MHz and insertion loss of only 0.7dB.

D 7080

$49.95

Ferrite Suppressors

Clamp-On

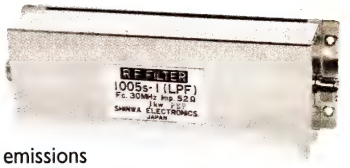
Great for suppressing HF-VHF RF interference in cables where it's not practical to cut the cable to insert a filter. Useful for reducing noise radiated by computer leads, and for suppressing interference to phone cables and TVs from near-by transmitters. Just clamp over cable and suppressor acts as an RF choke.

The more turns of the cable through the suppressor, the higher the series impedance to RF interference. Comes in 2 sizes with locking nylon housing. #43 ferrite material. Typical impedance, with one turn through the core is listed below.

	25MHz	100MHz
2 x 43-251 Core (D 5370)	171	275
2 x 43-151 Core (D 5375)	159	245

For cables up to 6mm diameter	D 5370	$7.95
For cables up to 13mm diameter	D 5375	$12.95

Transmitter Low Pass Filter High Power



A high-power (1000W PEP) Japanese filter from Shinwa that helps eliminate stubborn TV interference caused by out-of-band emissions from HF transceivers. Cut-off is around 30MHz with a typical attenuation of around 75dB above 40MHz. Impedance is 52 ohm and insertion loss just 0.7dB.

D 7082

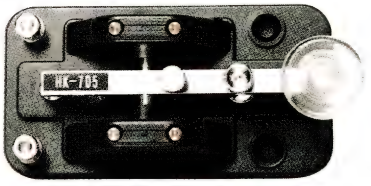
$99.95

Economy Morse Key

A bargain-priced morse key that's ideal for practising or learning Morse Code. As used in the Funway into Electronics series. Made in Japan.

D 7105

$12.95



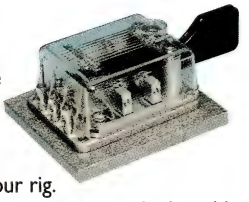
Quality Morse Key

A quality Japanese morse key that uses solid brass contacts and features an ABS plastic base, adjustable key tension and thumbscrews for cable attachment. Hi-Mound HK-705.

D 7106

$64.95

Morse Paddle



Send professional-sounding morse code signals by connecting this quality Japanese morse paddle to the electronic keyer in your rig. It uses a solid metal non-slip base and adjustable spring tension to provide the quick response needed for low-fatigue CW. Comes complete with dust cover and thumb-screw connectors for easy cable connection. Hi-Mound model MK-706. *Limited stock.*

D 7108

$125

FT-2500M 2m Heavy-Duty Transceiver

Built tough to take the rough stuff, the Yaesu FT-2500M meets US MIL-STD 810C for shock and vibration so it'll provide years of reliable mobile operation. Its easy-to-operate front panel design, rubber coated knobs, and large Omni-Glow display are teamed up with a one-piece diecast chassis to set the FT-2500M apart from other 2m mobiles. For improved front-end performance, Yaesu's exclusive 3-stage Advanced Track Tuning feature and dual-FET mixer reduce overloads from strong signals while providing excellent sensitivity and wide-band receive operation.

Also includes:
- 31 tuneable memories
- Inbuilt CTCSS encoder
- 7 selectable tuning steps
- Various scanning modes
- MH-26 hand mic, mobile mounting bracket & DC power lead.

Specifications

Frequency range:	Tx 144-148MHz, Rx 140-174MHz
Output power:	50W, 25W, 5W
Sensitivity:	better than 0.2uV for 12dB SINAD
Image rejection:	better than 70dB
Max audio output:	2.0W into 8 ohms (10% THD)
Dimensions:	160 x 50 x 180mm (W.H.D)

D 3632 **2 YEAR WARRANTY** YAESU **$599**

FT-8100R 2m/70cm Mobile

The stunning new Yaesu FT-8100R is a state of the art 2m/70cm band mobile transceiver that combines high power and the industry's most versatile memory system with an excellent wideband receiver and solid construction. It's US MIL-STD-810 shock and vibration rating is your assurance of years of reliable operation. Includes hand mic, mounting bracket and fused DC power cord.

Other features include:
- 198 memory channels
- CTCSS encoder
- Inbuilt crossband repeater facility
- Dual receive capability (VHF/UHF, VHF/VHF, UHF/UHF)
- Socket for 1200 and 9600 baud packet operation
- Removable front panel (requires YSK-8100)
- Inbuilt antenna duplexer
- 3 selectable power output levels per band.

Specifications

Frequency range:	Tx 144-148MHz, 430-450MHz Rx 110-550MHz, 750-1330MHz* *(800MHz cellular locked out)
Output power:	2m: 50W, 20W, 5W 70cm: 35W, 20W, 5W
Dimensions:	140 x 40 x 152mm (W.H.D)

D 3314 **2 YEAR WARRANTY** YAESU **$999**

YSK-8100 Separation Kit D 3313 **$109.95**

FT-3000M 70W 2m Mobile

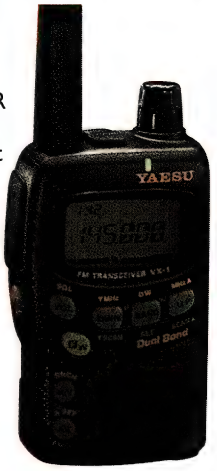
An amazing 2m mobile transceiver from Yaesu with up to 70W RF output, MIL-STD 810 shock and vibration resistance, wide band receiver coverage (110-180 and 300-520MHz), dual-band or dual in-band receiver facility, 1200/9600 baud packet socket, and a very large back-lit alphanumeric LCD screen. The FT-3000M has a total of 81 memories, as well as a Spectrum Scope mode that allows you to view activity above and below the operating frequency, or activity among six programmed memories. A programming menu holds over 50 transceiver settings for easy 'set and forget' access, and includes a scrolling text help guide, while twin fans provide optimum cooling during long transmissions for greater component reliability. The FT-3000M is supplied with a MH-42A6J hand mic, DC power lead, and detailed instruction manual.

Specifications

Frequency range:	Tx 144-148MHz Rx 110-180, 300-520, 800-824,849-869, 894-999MHz
RF output:	70, 50, 25, 10W
Sensitivity (Ham bands):	0.2uV (Main Rx), 0.25uV (Sub Rx)
Dimensions:	140 x 40 x 180mm (WHD)

D 3700 **2 YEAR WARRANTY** YAESU **$749**

VX-1R 2m/70cm Micro Handheld



One of the world's smallest dualband handhelds, just 47 x 81 x 25mm (W.H.D) including a high capacity 700mA/H Lithium Ion battery! The VX-1R covers both 2m and 70cm Amateur bands, plus offers AM/FM and TV sound reception, 2 hour fast charging as standard, simple settings and a large LCD screen.

Features
- Tx 144-148, 430-450MHz
- Rx 0.5-1.7MHz, 76-300MHz, 300-580MHz, 580-999MHz (cellular locked out).
- Output: 2m/70cm 0.5W (at 3.6V), 1.0W with external DC
- 291 Memories, most with alpha naming
- AM, FM(n), and FM(w) reception modes
- CTCSS encode/decode
- 31 Smart Search™ memories
- Tone search for CTCSS and DCS
- Includes FNB-52LI 3.6V 700mA/H Lithium Ion battery, regulated AC adaptor/charger, antenna and belt-clip.

D 3665 **2 YEAR WARRANTY** YAESU **$469**

Yaesu VX-1R Accessories

D 3666	FBA-20 holder for 1 x 'AA' alkaline battery. Includes internal voltage step-up circuit.	**$43.95**
D 3667	FNB-52LI 3.6V 700mA/H Lithium Ion battery pack.	**$59.95**
D 3668	E-DC-15 DC cigarette lighter style regulated adaptor/charger with DC cable.	**$65.00**
D 3669	CSC-71 soft carry case.	**$19.95**
D 3661	CN-3 SMA-BNC adaptor.	**$12.95**

YAESU

FT-50RD 2m/70cm Handheld

The Yaesu FT-50RD is an amazingly compact 2m/70cm Amateur band handheld transceiver which provides MIL-STD 810 shock and vibration resistance, wideband receiver coverage, simple menu settings for most functions, and compatibility with the optional Yaesu ADMS-1D software/ interface package for PC programming of many functions.

Features

- Tx 144-148MHz, 430 – 450MHz
- Rx 76-200, 300 – 540, 590 – 999MHz*
- FTT-12 keypad provides digital voice recording, DTMF paging, CTCSS/DCS scanning, and CTCSS encode/decode.
- 2m/70cm RF output: 2.5, 1.0, 0.1W; up to 5W with optional battery or 12V supply.
- 'Omni-glow' LCD for easier night-time viewing
- 112 memory channels with 4 character alpha-numeric naming
- High speed scanning, 12v DC socket, digital code squelch
- Dual watch allows monitoring of sub-band activity
- Direct FM modulation for better audio quality
- 5 battery saving systems (includes Rx and Tx Save, and Auto Off)
- Rear panel clamshell battery pack
- Comes with FNB-40 slimline 6v 650mA/H NiCad battery pack, flexible 2m/70cm antenna and modified M-9626 AC plugpack adaptor for NiCad charging. **Cellular blocked*

D 3660 **2 YEAR WARRANTY** **$599**

YAESU

VX-5R 6m/2m/70cm Deluxe Hand Held

Tiny yet incredibly rugged, the VX-5R provides 6m, 2m and 70cm Amateur band operation with 5W output as standard (4.5W on 70cm), made possible by a unique PA design and a super high-capacity 7.2v 1100mA/H Lithium-ion battery. Plus, ultra-wide VHF and UHF as well as AM medium-wave and shortwave reception facilities are provided, along with a large backlit dot-matrix LCD screen. All this in a diecast aluminium enclosure just 58 x 87 x 28mm WHD (w/o knobs or antenna)!

Features

- Tx: 50-54, 144-148, 430-450MHz
- RX: 0.5 – 1.8MHz, 1.8 – 16MHz, 47-729MHz, 800-999MHz (cellular blocked)
- Full feature keypad, CTCSS encode/decode, Digital code squelch
- Comprehensive menu system
- Over 200 memories
- 8 digit alpha-numeric memory labelling
- 5 battery saving systems, plus Tx/Rx usage monitor
- Spectra-Scope™ for monitoring adjacent channel activity
- Comes with FNB-58LI Lithium-ion battery, flexible antenna and AC adaptor/charger

NEW FOR '99

D 3670 **$699**

YAESU

FT-10R and FT-50R/RD Accessories

CSC-69 carry case suit FNB-40 NiCad	D 3656	**$22.95**
PA-17 battery extension cable	D 3654	**$39.95**
Clip-10 heavy-duty belt clip	D 3657	**$7.95**

NiCad Battery Packs

To suit FT-10R and FT-50R/RD

FNB-40 6V 650mA/H	D 3651	**$79.95**
FNB-41 9.6V 600mA/H	D 3652	**$89.95**
FNB-42 9.6V 1100mA/H	D 3653	**$97.50**

Advanced Data Management Software

An advanced way to program many of the functions on the latest Yaesu handheld and mobile transceivers. Each package consists of an interface that plugs into the serial port of a PC and connects to the transceiver via its microphone socket (for handhelds) or its packet socket (for mobiles). Also provided is easy-to-use 3.5" format PC software with pull-down menus that allow for programming and naming of memory channels, selection of output power, CTCSS tones, scan and battery saver operation plus much more.

ADMS-1D Suits FT-10,50R/RD,51R,VX-1R	D 3753	**$89.95**
ADMS-2D Suits FT-3000M,8500,8000R/8100R	D 3759	**$89.95**

VX-5R Accessories

CSC-73 Carry Case	D 3671	**$26.95**
CD-15 Fast Desk Charger	D 3672	**$79.95**
FBA-23 Dry-Cell battery case	D 3673	**$49.95**

MH-35A2B Speaker/Microphone

A new Yaesu speaker/mic with rounded styling that fits comfortably in your hand. Suits many recent Yaesu model handhelds, and comes fitted with 3.5mm and 2.5mm plugs.

D 2112 **$49.95**

YAESU

MH-34B4B Speaker/Microphone

Uses new rounded styling making it easier to grip, and is fitted with a 3.5mm stereo plug to save space on smaller radios. Suits latest Yaesu FT-10R, FT-50R/RD, VX-1R and VX-5R handhelds.

D 2114 **$49.95**

YAESU

YH-1 Headset

Keep both hands on the wheel with this lightweight headset mic! It has a hinged mic boom that can be swung out of the way when not in use, an earphone speaker and is collapsible for easy storage. Fitted with a 3.5mm plug for use with the Yaesu SB series PTT boxes.

D 2195

YAESU

$59.95

YH-2 Headset

A quality headset mic that's similar to the lightweight and robust Yaesu YH-1, but this one is fitted with 2.5mm and 3.5mm connectors to suit many late-series Yaesu handhelds. Electret mic impedance is approx. 500ohms, headphone impedance approx. 32ohms.

D 2200

YAESU

$59.95

VC-25 VOX Headset

A lightweight headset with selectable voice activated (VOX) or PTT operation to suit the Yaesu VX-1R and VX-5R handhelds. Provides variable VOX gain. Adjustable headband for greater comfort.

D 3664

YAESU

$99.95

MD-100A8X Deluxe Desktop Microphone

Designed to suit the FT-900, FT-847 and FT-1000MP, although also useable with many other Yaesu HF transceivers, the MD-100A8X features selectable low-cut filtering or high emphasis active filtering that allows you to tailor the microphone response for optimum voice clarity. Constructed with a heavy base, it provides a multi-axis pivot system for easy microphone positioning, has a large locking PTT switch, and convenient scanning controls.

D 2127

YAESU

$229

MH-29A2B Remote Control Mic

A compact speaker/microphone that provides a remote LCD screen with easy-to-read backlighting! Has duplicate keys for call channel, VFO and memory selection, plus busy/Tx LED display. Supplied with a user-programmable key. For use with the FT-530 and FT-51R only.

D 2119

YAESU

$149

E-DC-6 DC Power Cord

Allows easy connection of the Yaesu FT-26, 415/815/530 series, FT-10R/50R or VX-5R transceivers to a 13.8 volt supply.

D 3613

$13.95

E-DC-5 Filtered DC Adaptor

Provides filtered DC when using your Yaesu FT-26, 415/815, FT-530, FT10R/50R or VX-5R transceiver in the car. Plugs into the cigarette lighter socket.

D 3611

$49.95

E-DC-12 DC Adaptor/Cable

Allows connection of an external DC power source, such as a cigarette lighter socket, to the Yaesu FT-11R and FT-51R handheld transceivers.

D 3646

$49.95

LF-1 DC Line Filter

Designed to reduce noise (such as alternator whine) from the 13.8V DC lead that runs between a Yaesu transceiver and the 12V power system in a vehicle. Rated at 20A intermittent, 16A continuous. The LF-1 is compatible with a number of Yaesu transceivers including the FT212RH/712RH/912R, FT-2200/2500M/2400H, FT-5200/8000R/8100R/8500 and FT-3000.

D 5390

$24.95

PA-17 Battery Extension Cable

A convenient way to carry the larger battery packs for the FT-10R/50R without weighing down your hand-held. Allows the battery to be clipped to your belt, with a slim and flexible cord providing power to the hand-held unit. *Limited stocks.*

D 3654

$39.95

E-DC-15 DC Adaptor/ Charger

A regulated cigarette lighter style DC adaptor for use with the Yaesu VX-1R handheld. Provides regulated and filtered DC for fast charging and transceiver operation.

D 3668

$65

CN-3 SMA-BNC Adaptor

Allows for the use of a BNC antenna or coax connection to interface with the SMA connector used on the FT-50R, VX-1R and VX-5R handhelds. SMA male to BNC female.

D 3661

$12.95

Clip-10 Heavy Duty Belt Clip

A heavy-duty spring loaded belt clip to suit larger battery packs from the Yaesu FT-10R and FT-50R series hand-helds. Replaces the standard belt clip supplied with battery packs. *Limited stocks.*

D 3657

$7.95

2-Way Coax Switch

A heavy-duty, 2-way coax switch suitable for amateur, CB or commercial applications. It is well constructed with a die-cast case and can handle up to 2kW PEP or 1kW CW at 30MHz with less than 0.2dB insertion loss. SO-239 sockets.

D 5200 **$39.95**

Quality 2-Way Coax Switch

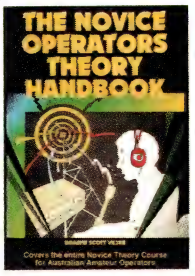
This quality Japanese 2-way 50 ohm coax switch is suitable for HF and VHF applications, and uses a self-cleaning contact mechanism for trouble-free operation. It offers superb isolation (>70dB @ 200MHz), low insertion loss (<0.1dB @ 1000MHz), and 1kW PEP HF power rating. Revex model S20.

D 5208 **$69.95**

2-Way N-Type Coax Switch

The Revex S20N is a very high quality 50 ohm N-type coax switch designed for exacting use on frequencies up to 1500MHz. It offers an insertion loss of less than 0.1dB at 1500MHz and uses a self-cleaning contact mechanism to ensure trouble-free operation. Maximum power rating is 1kW PEP.

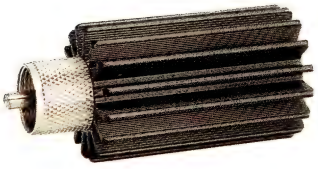
D 5202 **$119.95**



Novice Study Kit

The simple way to get started in Amateur radio! The novice study kit comes with the informative Novice Operators Theory Handbook, which makes theory easy to understand, and a Morse Code training tape.

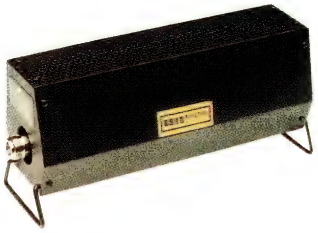
D 7112 **$26.95**



15-Watt Dummy Load

A coax terminator with superb SWR characteristics. With a heat-resisting ceramic resistor surrounded by an anodised aluminium heatsink, this dummy load provides less than 1.2:1 SWR DC to 500MHz. It's fitted with a PL-259 plug, has an impedance of 50 ohms and it can handle 15W continuous or 100W for up to 30 seconds. Made in Japan. Revex model L20.

D 7025 **$49.50**



250-Watt Dummy Load

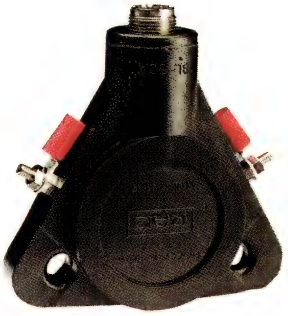
Ideal for testing high power transceivers and amplifiers, the Revex L250N 50 ohm dummy load is rated at 250W (50% duty cycle) and 1kW peak power. Its internal construction and low-loss N-type socket allow it to be used over the DC-500MHz range with very low SWR. Includes desk stands for more efficient convection cooling. Made in Japan.

D 7028 **$215**

Toroidal Balun Kit

Make your own balun or impedance-matching transformer! This kit contains a 50mm iron-powder toroid, heavy-gauge insulated winding wire and detailed instructions. When used in a 1:1 52 ohm configuration, it can handle up to 2kW PEP with minimal insertion loss. Use it for antennas up to 30MHz, or RFI suppression on your hi-fi gear by wrapping as many turns of your speaker leads as will fit through the core.

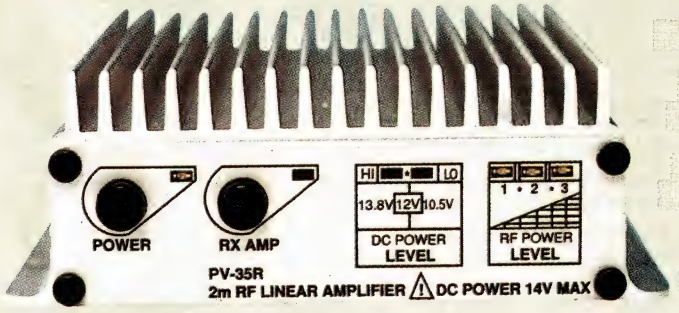
D 5350 **$19.95**



1kW HF Antenna Balun

Designed as a centre support for dipole or yagi antennas, this 'T' shaped 1:1 balun has 52 ohm unbalanced input and 52 ohm balanced output. An SO-239 socket is mounted into the base of the balun for easy coax connection. RF input power handling is 1kW PEP maximum, and insertion loss is less than 1dB. It can handle the entire HF band of 3-30MHz. RAK model BL-50A. Made in Japan.

D 5310 **$69.95**



2m 30W RF Power Amplifier

If you use your 2m FM hand-held at home or in the car, but find that 2-3 watts RF output isn't enough for reliable communications, this compact 2m 30W RF amplifier is the answer. It works with inputs from 0.5 to 5W, and produces up to 30W output with just 3W input, and even with just 1W input it will still provide around 15W output. A switchable 12dB gain low-noise GaAs FET receiver amplifier pre-amp can also be selected to provide improved performance in quiet RF areas. The amplifier includes a large heatsink for extended duty-cycle transmissions, fused DC power lead, SO-239 input/output connectors, and simple LED metering for DC supply voltage and relative RF output power. Frequency range 144-148MHz FM only. Requires 13.8V DC at 6A max. Size: 125 x 48 x 147mm (W.H.D) including protrusions. *Limited stocks.*

D 2515 **$129.95**

HF Antenna Systems

A range of helical HF amateur mobile antennas designed for Australian conditions. Simply install a base and attach the whip according to the band you require. Each whip is approximately 1.6m long, appropriately loaded, and features adjustable tuning. Maximum power handling is 200 watts. (Recommended base: 5/16" heavy duty, D 4313.)

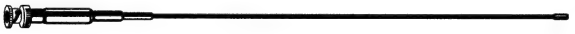
Band	Cat No.	Price	Band	Cat No.	Price
10m	D 4316	**$49.95**	40m	D 4311	**$49.95**
15m	D 4314	**$49.95**	80m	D 4310	**$59.95**
20m	D 4312	**$49.95**	**5 YEAR WARRANTY**		

'Rubber Duckie' 2m Hand-Held Antenna

This classic antenna is just 20cm long with a fast action BNC connector for attaching to your hand-held. Robust, yet very flexible, and has a reinforced base for extra strength and reliability. Covers 144 – 148MHz.

D 4330 **5 YEAR WARRANTY**

$29.95



2m/70cm Dual-Band Hand-Held Antenna

This dual-band 2m (1/4 wave) and 70cm (5/8 wave) antenna is very flexible and performs better than most standard antennas on hand-helds. Featuring a frequency coverage of 144-148MHz (unity gain) and 430-440MHz (3.2dB gain), it is just 440mm long, weighs only 50g and also works well with scanning receivers. BNC connector.

Made in Japan.

D 4334

$39.95

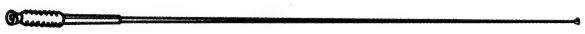
2m/70cm Dualband Handheld Antenna

This flexible antenna covers the 2m and 70cm Amateur bands, providing better performance than the standard antenna supplied with dualband transceivers such as the Yaesu FT-50R and VX-1R. The antenna consists of a thin, flexible metal whip section which is joined to an SMA-type male antenna connector, providing 1/4 wave performance on the 144-148MHz (2m band), and 5/8 wave performance on the 430-450MHz (70cm band).

Made in Japan.

D 4338

$44.95



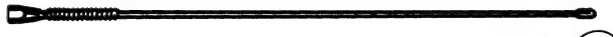
2m Telescopic 5/8 Wave Hand-Held

This 144MHz antenna stands just 22cm tall in its retracted 1/4 wave position, and can be extended to a full 132cm for excellent 5/8 wave operation. Made from durable stainless steel, it has a spring base to help protect it from rough handling, and a hand-held BNC connector for attaching to your transceiver.

Made in Japan.

D 4333

$44.95



2m 5/8 Wave Mobile

At 1.34 metres in length, this is an ideal choice for all 2 metre users. This very flexible mobile antenna has a long-life heat-shrink covering and provides approximately 3dB gain. Comes with a standard 5/16" female-threaded socket attached.

D 4207 **5 YEAR WARRANTY**

$22.50

Hustler RX-2 2m 5/8 Wave Magnetic Mount

A quality 2m 5/8 wave magnetic mount antenna for mobile or temporary base station use, supplied with 4.5m coax (PL-259 attached). American made, it provides 3dB gain with a power rating of 100W maximum and uses a flexible stainless-steel radiator to minimise wind loading.

D 4805

$49.95

70cm Colinear Mobile

This mobile whip antenna provides 4dB gain across the 430-440MHz range and may be cut for higher frequency operation. Comes with standard 5/16" thread to suit most UHF bases.

D 4030 **5 YEAR WARRANTY**

$24.95

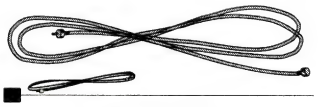
2m/70cm Mobile Antenna

An easy way to go mobile, the new fibreglass M270 antenna with standard 5/16" thread can be used with existing base/lead assemblies you may already have in place on a vehicle. Constructed on a strong fibreglass rod and covered with long-life polyolefin heatshrink, this 975mm long antenna covers 144-148MHz and 430-440MHz with a maximum power rating of 200W FM.

D 4808

$36.95

2m 1/2 Wave 'On-Glass' Antenna

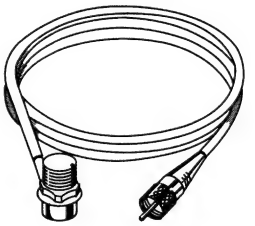


A high quality ground-independent mobile antenna that's easy to install without drilling holes. It's low-angle radiation pattern, slim radiator and an efficient coupling system provide excellent mobile performance. Provides 3dB gain, with power rating of 50W continuous (100W intermittent).

D 4206

$99.95

SO-239 Base/Lead Set



A convenient way to mount a PL-259 type antenna, this quality Japanese SO-239 base is pre-wired with 4m of low loss coax cable and has a PL-259 already fitted for connection to your transceiver.

D 4052

$32.95

SO-239 Magnetic Antenna Mount

A powerful Japanese magnetic-mount for use with PL-259 antennas. It's supplied with 4m of quality coax cable and fitted PL-259 plug. Suits small to medium VHF/UHF antennas such as the ST-7500.

D 4520

$59.95

High Performance VHF/UHF Base Station Antennas

Diamond base station antennas offer outstanding quality and exceptional value. These stacked collinear types provide high gain, wide bandwidth and a low radiation angle for extended range. The fibreglass reinforced polyester outer radome and gasket seals provide excellent all-weather operation, and compact ground-plane radials are supplied. Stainless-steel mounting hardware ensures a long, trouble-free life. Supplied with instruction sheets for easy set-up.

2m Antenna F-23A

Frequency:	144-148MHz
Gain:	7.8dB
Max. Power:	200W
Length:	4.53m, Max wind 40m/s
Type:	3 x 5/8λ
Connector:	SO-239 socket

D 4850 **$249**

2m/70cm X-200A

Frequency:	144-148MHz, 430-450MHz
Gain:	6dB on 2m, 8dB on 70cm
Max. Power:	200W
Length:	2.5m, Max wind 50m/s
Type:	2 x 5/8λ (2m), 4 x 5/8λ (70cm)
Connector:	SO-239 socket

D 4860 **$199**

2m/70cm X-510MA

Frequency:	144-148MHz, 433-450MHz
Gain:	8.3dB on 2m, 11.7dB on 70cm
Max. Power:	200W
Length:	5.2m, Max wind 40m/s
Type:	3 x 5/8λ (2m), 8 x 5/8λ (70cm)
Connector:	SO-239 socket

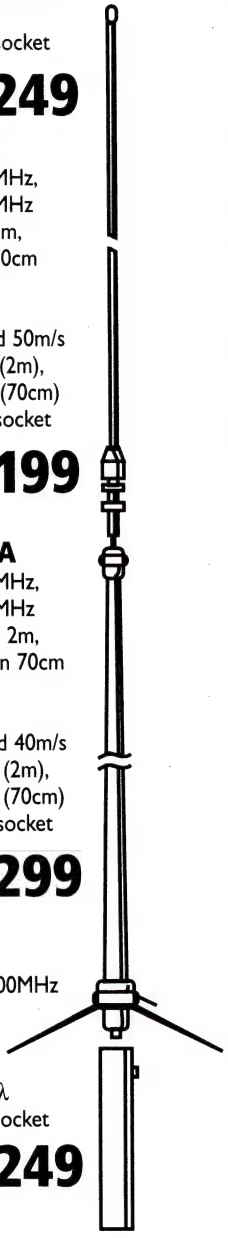
D 4837 **$299**

23cm F-1230A

Frequency:	1260-1300MHz
Gain:	13.5dBi
Max. Power:	100W
Length:	3.06m
Type:	25 x 1/2λ
Connector:	N-type socket

D 4870 **$249**

DIAMOND ANTENNA



2m 1/2 Wave Base Station Antenna

An Australian-made base station antenna that's 1.69m long and has a single section fibreglass reinforced polyester (FRP) radome for excellent all-weather operation. Covers the 144-148MHz range (<1.5:1 SWR) with a maximum power handling of 200W FM. Provides approximately 3dB gain. Fitted with an SO-239 socket mounted into the base.

D 4820 **5 YEAR WARRANTY**

MOBILE ONE **$59.50**

2m Heavy Duty Base Station Antenna

For use where long-range omni-directional 2m band (144-148MHz) coverage is required. This 3.4m long 1/2 wave over 1/2 wave colinear vertical antenna provides approx 5dB gain, and is housed in a very tough single-section fibreglass radome for all-weather protection. The strong aluminium base section is fitted with an N-type socket in its base for coax cable connection.

D 4822 **5 YEAR WARRANTY**

BENELEC **$139.95**

6m 1/2 Wave Base Antenna

A rugged Australian-made vertical antenna designed to cover the 51 to 54MHz range, with minimum SWR around 53MHz. Built using high tensile T81 grade aluminium, it's just 2.9m long with a sealed base section and 100W minimum power rating. Complete with mounting hardware.

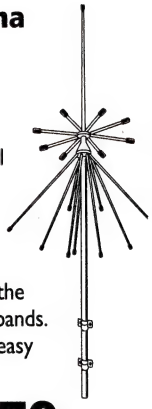
D 4825

D & G Antennas **$69.95**

D-130J Discone Antenna

Covers the frequency range 25-1300MHz and comes with mast-mounting hardware and instructions. Easy to assemble and install with extensive stainless-steel construction making it extremely durable. A wide frequency coverage means that it's ideal for scanning receivers, as well as transmitters up to 200W PEP for the 6m, 2m, 70cm and 23cm amateur bands. Uses an SO-239 coax socket for easy coax connection.

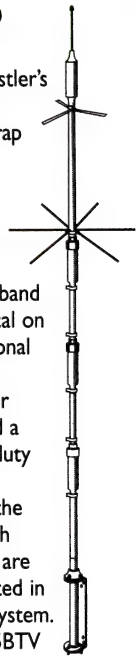
D 4840 DIAMOND ANTENNA **$179**



Rugged HF 5-Band Trap Vertical Antenna

The rugged 5BTV incorporates Hustler's exclusive trap design (25mm solid fibreglass formers, high tolerance trap covers and low loss windings) for accurate trap resonance with 1kW PEP power handling. Wide-band coverage is provided on the 10, 15, 20 and 40m bands (SWR typically 1.15:1 at resonance, < 2:1 SWR at band edges) with 80kHz bandwidth typical on 80m at less than 2:1 SWR. An optional 30m resonator kit can be installed without affecting operation of other bands. High strength aluminium and a 4mm (wall thickness) extra heavy-duty base section guarantee optimum mechanical stability. At just 7.65m, the 5BTV can be ground mounted (with or without radials, although radials are recommended), or it can be mounted in an elevated position with a radial system. Unlike other antenna designs, the 5BTV can be fed with any length of 50-ohm coax cable.

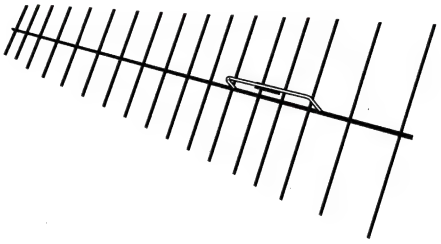
D 4920 HUSTLER **$449**



30m Resonator Kit

Adds 30m coverage to the 5BTV, and includes all hardware. **$99.95**

D 4921



LP-1300 Log Periodic Yagi

The Maldol LP-1300 is a Log Periodic Yagi beam antenna designed to provide useful gain across the 100 to 1300 MHz range, making it ideal for scanner enthusiasts and ham operators who need a directional wide-band antenna.

The LP-1300 consists of a 17 element Yagi with a special feed system that provides low SWR (less than 2.0:1) across the 100-1300MHz range, and can handle up to 500W FM when used for transmitting.

Gain:	6.0dBi to 10.0dBi (depending on frequency)
Boom length:	1.46m
Longest element:	1.35m
Weight:	2.3kg
Suitable mast:	28-60mm diameter (not supplied)
Max wind speed:	40m/sec
Connector:	SO-239

D 4828 **$269**

Uniden 144XLT Desktop Scanner

Offers wide frequency coverage, yet is extremely easy to operate. With 16 programmable channels and 66-88, 137-174 and 406-512MHz coverage, it's great for listening to known VHF/UHF services. Through the use of a straightforward 2-digit LED display you can easily check what frequency is entered into each channel, and a specific frequency can be given priority status where necessary. Supplied complete with AC adaptor and telescopic antenna.

D 2744

Uniden **$149.95**

Uniden 60XLT Scanner

Listen in on exciting radio frequencies including those used by commercial services, emergency services, as well as Amateur and UHF CB. This latest version Uniden 60XLT now includes 12.5kHz frequency steps on hi-band VHF, so it's also great for listening to ethnic language services that don't operate on the FM broadcast band. This 10-channel programmable VHF/UHF receiver covers the 66-88, 137-174 and 406-512MHz frequency ranges. Uses 4 x 'AA' Alkaline or 4 x 'AA' NiCad batteries.

D 2748

Uniden **$175**

Uniden 120XLT Scanning Receiver

One of our best selling scanners, the 120XLT is ideal for beginner to intermediate users, provides 9-band VHF/UHF coverage including airband, 100 memories divided into 10 banks for easier scanning, and improved super-fast Scan and Search features (scan up to 100 channels/sec, search at 100 or 300 steps/sec). Covers 66-88MHz, 108-174MHz, and 406-512MHz with pre-programmed channel steps to suit most Australian conditions. Also features 10 priority channels, Data Skip and memory back-up. Complete with NiCad battery pack, AC charger and detailed instructions.

D 2752

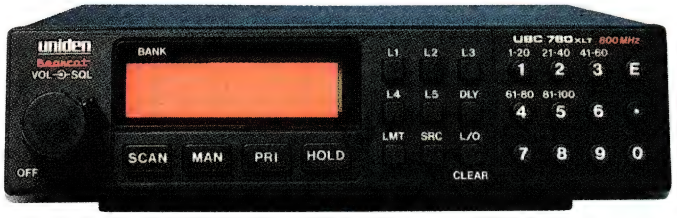
Uniden **$299**

Uniden 220XLT Scanning Receiver

Great performance in a compact package! The Twin Turbo 220XLT handheld scanner provides 10-band VHF/UHF coverage including airband, 200 memories divided into 10 banks for easier scanning, plus super-fast Scan and Search features (scan up to 100 channels/sec, search at 100 or 300 steps/sec). Covers 66-88MHz, 108-174MHz, 406-512MHz and 806-956MHz with pre-programmed channel steps to suit most Australian conditions, including 800MHz. Also includes Data Skip and Lock Out for faster scanning, direct keypad channel access, NiCad battery pack and AC charger, detailed instructions, and a 2-year warranty.

D 2755

Uniden **$369**



Uniden 760XLT Mobile/Base Scanner

Designed for ease of operation whether at home or in your car, the 760XLT has a great array of features like a back-lit digital display, 100 memories, nine-band coverage, automatic search, five selectable band search presets, scan delay, and direct keypad channel access. Complete with mounting bracket, DC power cable, pop-out stand, antenna, and AC adaptor. Covers 66-88MHz, 118-136MHz, 136-174MHz, 406-512MHz and 806-956MHz. *Limited stocks.*

D 2760

Uniden **$299**

Wideband Scanner Pre-Amp

GaAsFet pre-amp designed to improve the sensitivity of most scanners. It connects between the scanner and antenna, providing variable gain (-10dB to +20dB) over the 24 to 2150MHz range. Uses surface-mount devices and a GaAsFet amp for a very low 2dB noise figure. Switchable band-pass filters reduce the chances of interference from strong out-of-band signals. Made in Japan.

D 3820

$175

Uniden 9000XLT Deluxe Base Scanner

The Uniden 9000XLT provides excellent performance and many new functions for ease of operation. It sports a large back-lit LCD screen, speedy Twin Turbo operation (scan at 100 channels/sec, search at up to 300 steps/sec) and 500 memories (of which 250 can have alpha character names stored). Frequency coverage is 25MHz to 549.95MHz and 760MHz to 1300MHz, with 4 selectable step sizes, 10 priority channels, plus AM, FM narrow and FM wide reception modes. Supplied complete with an AC adaptor and telescopic antenna.

Other features include:

- Auto memory sorting for faster scanning
- Rotary tuning control
- Scan/search delay
- Data Skip and channel/frequency lockout
- Direct keypad frequency or memory entry
- Switchable attenuator to reduce overloading

D 2739

Uniden **$499**

Camnis HSC-010 Scanner

This medium-sized, handheld scanner covers the 0.5MHz to 1300MHz range with FM(n), FM(w), and AM mode reception capabilities. It provides 1000 memory channels for storing favourite frequencies, and has 10 programmable Search Banks for more advanced users. Battery-free EEPROM memory back-up is also provided. The HSC-010 provides Search step rates between 5kHz and 995kHz (which are selectable in either 5kHz or 12.5kHz multiples), so there is plenty of flexibility when searching for signals on different bands which use different frequency spacings. Search speed is 20 channels per second. Other features include a priority channel, plus an attenuator to reduce overloads from strong signals. Includes 4pcs AA NiCad batteries, antenna, carry case and AC charger.

Made in Japan.

D 2793

CAMNIS **$399**

Uniden 3000XLT Scanning Receiver

Provides wide 16-band frequency coverage (25-549.95MHz, 760-1300MHz), large back-lit LCD screen, 400 memories divided into 20 banks for easier scanning, together with super-fast Scan and Search functions (scan up to 100 channels/sec, search at 100 or 300 steps/sec). An auto battery save circuit prolongs battery life while on standby, while Data Skip and lock out functions allow for faster scanning. Other features include Auto Sort for faster bank scanning, 10 priority channels, selectable Search step sizes (5, 12.5, 25, 50kHz; and 30kHz on 800MHz), Scan/Search delays, battery-free memory back-up, and attenuator to reduce overload from very strong signals. Complete with NiCad battery pack, AC charger, flexible antenna, carry case, and detailed instructions. D 2730

Uniden **$475**

Yupiteru MVT-9000EU Deluxe Scanner

The Yupiteru MVT-9000EU is an amazing Japanese handheld scanner that provides wide 531kHz to 2039MHz frequency coverage, a large and informative backlit LCD screen, and excellent sound quality. All-mode reception capabilities are provided, (FM, W-FM, AM, and SSB modes) plus there are 18 selectable step rates between 50Hz and 125kHz to allow the best tuning choice for the signals being listened to.

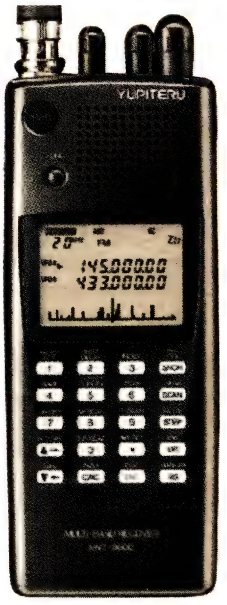
For easy storage of popular frequencies the MVT-9000EU provides 1000 memory channels (20 banks of 50 channels each) which can store frequency, frequency step, reception mode, as well as the Attenuator setting. Selected memory banks can be scanned to check on activity at a rate of up to 30 channels per second. Search operation is provided across 20 bands, with 500 Search Pass memories provided to 'lock-out' unwanted frequencies for more efficient Search operation.

Other features include:

- Inbuilt ferrite rod antenna for AM broadcast band reception
- A Band Scope function allows checking of adjacent channel activity, with two selectable Scope bandwidths. Using the Marker mode you can substitute the centre frequency of the Bandscope with a movable marker, so you can see the frequency and hear the audio of specific adjacent signals
- Bargraph signal strength meter
- 10 Priority channels
- 50 Autowrite memories to store active frequencies during Search operation
- Title editing for Band, Bank and Channel name is provided

Complete with NiCad batteries, AC plugpack charger, car cigarette lighter lead, antenna, carry strap and belt-clip.

D 2797 **YUPITERU** **$999**



AOR AR-8200 Deluxe Scanner

NEW FOR '99

Based on a totally new design, the AR-8200 provides complete 530kHz to 2040MHz coverage, 1000 memory channels and an impressive multi-line LCD screen, all in a compact handheld form that's just 61 x 143 x 39mm (W.H.D) and weighs less than 400g!

Other features include:

- All-mode reception – WFM, NFW, SFM (Super-narrow FM), WAM, AM, NAM, USB, LSB and CW
- Channels steps programmable in multiples of 50Hz
- Flexible memory bank layout (between 10 and 90 channels each bank)
- 40 Search Banks, with 50 Pass channels per bank
- 12 character text comments per memory channel and Search Bank
- Battery-free Flash-ROM memory back-up
- Special tuned front-end for improved VHF receiver performance
- In-built 3kHz SSB filter plus true carrier re-insertion SSB reception
- Detachable medium wave (AM broadcast band) antenna
- Multi-function Band Scope facility
- Computer control via optional lead and internet downloadable software
- Includes NiCad batteries, antenna, AC adaptor/charger, belt-clip and carry strap

D 2726

AOR **$1199**

HF/6m Power/SWR Meter

For high-power operation over the 1.8-60MHz range, this Japanese-made Revex W500 provides a large, clear meter for ease of reading. Enclosed in an all-metal case for long-term durability, the meter has power ranges of 20W, 200W and 2kW with less than 0.1dB loss, as well as SWR measurement.

Limited stocks.

D 1365 **$169**

VHF/UHF Power/SWR Meter

A high-quality SWR/power meter suitable for Amateur, UHF CB and commercial applications. Durable Japanese construction assures you of maximum reliability. With an all-metal case, large meter display, 140-525MHz coverage with less than 0.3dB insertion loss, and 4W, 20W & 200W power scales. Revex model W540.

D 1370 **$185**

Revex W560N HF/VHF/UHF SWR/PWR Meter

Quality Revex wide-band SWR meter, offering 2 inbuilt sensors for 1.8MHz to 525MHz coverage! Provides measurement of 3 power levels (3W, 20W, 200W) and SWR. Uses an N-type socket for the VHF/UHF sensor to ensure minimal loss.

Measures 120 x 80 x 85mm.

D 1375 **$249**

3-15V 6 Amp DC Power Supply

A great value power supply for hobby users that need a low noise regulated DC power supply that can handle high duty cycle operation. The solidly-built supply covers the 3-15V range and can provide current up to 6A continuous at 15V (lower current at lower voltages). It features voltage and current metering, an internal heatsink & thermally-switched cooling fan, high & low current front panel DC output terminals and a strong metal case. Extensive overload protection is provided through dissipation limiting circuitry for the pass transistors, an AC mains circuit breaker, a transformer thermal fuse and specially designed transformer.

D 3806 **$169**

Revex W570 HF/VHF/UHF SWR/PWR Meter

Top of the line performance! The W570 provides switchable 1.6-160, 400-525, 700-1100, and 1240-1300MHz coverage, with measurement of 3 power levels (5, 20, 200W) and SWR. The external UHF sensor uses N-type sockets for minimal loss, and can be mounted remotely for easier cable connection to the meter. Measures 120 x 80 x 155 (including protrusions).

D 1377 **$299**

3-15V 13 Amp DC Power Supply

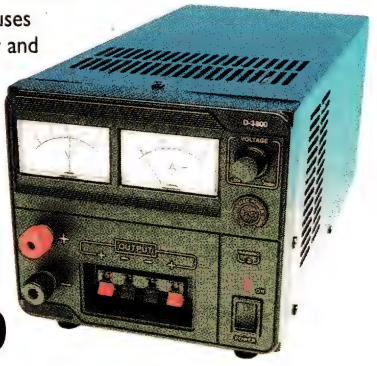
Like no other – packed with features and affordable! This benchtop power supply is ideal for service organisations and enthusiasts needing a low-noise regulated DC power source. DC output is from 3-15V and current is up to 13 amps continuous at 15V (lower current at lower voltages). With front panel metering, high current banana-style and low-current output connections for extra flexibility. An internal heatsink and thermally-switched fan provides cooling without protrusions in the metal case (measuring 320 x 150 x 145mm). It has extensive overload protection through dissipation limiting circuitry for the pass transistors, AC mains circuit breaker, and a transformer thermal fuse.

D 3812 **$229**

3-15V 25 Amp DC Power Supply

Similar to the 13 amp DC power supply, this benchtop power supply is more powerful, with current up to 25 amps ICAS at 15V, 20 amp continuous at 13.8V, and lower current at lower voltages. It also has front panel metering, plus high current banana-style and low-current output connections for extra flexibility. An internal heatsink and thermally-switched fan provides cooling without protrusions in the metal case (also measuring 320 x 150 x 145mm). Specially modified for more reliable long-term operation, it uses a rugged 50 amp bridge rectifier and trifilar wound transformer. Also provided is extensive overload protection through dissipation limiting circuitry for the pass transistors, a 30 amp instantaneous current limit, AC mains circuit breaker, a transformer thermal fuse and fused auxiliary secondary winding.

D 3800 **$299**



Light-Duty Base

Standard 5/16" 26TPI threaded-mount in black polypropylene plastic base. Suits small to medium CB antennas or small VHF whips. Mounting plate includes solder lugs for coax connection. D 4056

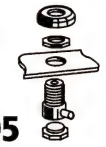
$7.95

Solderless Light Duty Base

Reduce antenna installation time! This new design allows you to install your coax without soldering! As there's no soldering, this 5/16" 26TPI antenna base can be re-used time and time again. D 4054

$8.95

SO-239 Antenna Base



Waterproof coaxial SO-239 type base for use with PL-259 antennas. Ideal when you often need to remove the antenna. D 4035

$13.95

VHF/UHF Base

A waterproof design made especially for low loss VHF/UHF use. Cable enters through the bottom and terminates on the antenna thread. D 4516

$9.95

PL-259 to 5/16" Adaptor

This simple adaptor allows connection of standard 5/16" thread antennas to SO-239 based antenna mounts. D 4522

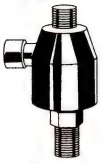
$12.95

Heavy-Duty Base

Standard 5/16" 26TPI thread using a stainless-steel rod and metal base plate for greater strength and reliability. D 4313

$19.95

Extra-Heavy Duty Antenna Mount



Uses sturdy 1/2" thread to suit larger antennas. Coax input is via a side-mounted SO-239 connector. Use with D 4518 adaptor for 5/16" thread antennas. D 4517

$49.95

Antenna Base With Lead

Standard 5/16" threaded base with 3m of quality coax and moulded PL-259 plug attached. D 4055

$17.75

UHF Antenna Base With Lead

UHF 5/16" threaded base with 3.6m of RG-58C/U coax and plug attached. Mount it directly, or use it with virtually any of our mounting brackets.

PL-259 Plug Version	D 4050	**$19.95**
BNC Plug Version	D 4051	**$21.50**

Dipole Base And Lead Kit

Moulded 5/16" base with 3.6m coaxial lead and PL-259 plug. Fits onto gutter, boot or mirror mount. Patented. D 4022

$22.50

Universal Mount Magnetic Base

Can't drill a hole in your new car? This 5/16" thread quality magnetic mount can be used with compact antennas (150g max.) and comes with a mylar anti-scratch surface, 3.6m of coax, and fitted PL-259 plug. D 4514

$45

Heavy Duty Magnetic Mount

A very powerful magnetic mount with standard 5/16" thread for use with medium size CB whips. With 3.6m coax and fitted PL-259 plug. D 4513

$49.95

Low-Profile Gutter Mount

A sturdy gutter mount which reduces the total height of your antenna by mounting it slightly lower than a standard base. With variable angle adjustment. D 5110

$22.95

Heavy-Duty Gutter Mount

A heavy-duty Japanese gutter mount to suit most vehicles. Secures to the roof gutter with two screws and has variable angle adjustment. D 5100

$16.95

'Z' Type Mounting Bracket

A sturdy bracket for attaching the antenna base to the boot lip (the bolts/holes are concealed in the water channel under the boot lid).

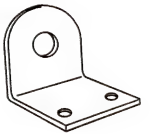
Black Zinc	D 5152	**$7.95**
Standard	D 5150	**$7.95**
Stainless Steel	D 5153	**$9.95**

Angled 'Z' Mounting Bracket

Quality stainless-steel 'Z' bracket with angled base for mounting on a vehicle with a sloping boot-lid. Keeps the antenna as close to vertical as possible.

R/hand rear	D 5155	**$9.95**
L/hand rear	D 5156	**$9.95**

'L' Style Mounting Bracket



An 'L' shaped bracket for mounting an antenna base on the inside of the vehicle's boot or bonnet lip. Both styles come with two stainless-steel self tapping screws.

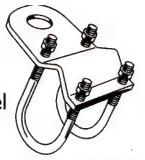
Stainless-steel	D 5160	**$8.95**
Black Zinc VR	D 5162	**$7.95**

Mirror/Roof-Rack Mount

Allows many CB antennas to be mounted on a truck style side-mirror or car roof-rack.

Standard	D 4512	**$9.95**
Stainless-steel	D 4519	**$18.95**

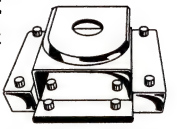
Bull-Bar Antenna Mount



For mounting small to medium antennas on a 4WD bull-bar. Uses a rugged black zinc-coated mounting plate with stainless-steel U-bolts and hardware. D 5165

$19.95

Boot/Bonnet Mount



Stainless-steel boot or bonnet mount. Grips the top of the boot lid with non-scratch bumpers. Stainless-steel screws secure it to the underside of the boot lid. Suits all but the biggest antennas. D 4515

$21.95

Compact Stainless Steel Spring

A lightweight spring which reduces the damage caused by common everyday hazards such as low carpark roofs and overhanging trees. D 4500

$19.95

Medium Stainless Steel Spring

Suitable for medium to large antennas with a standard 5/16" thread fitting. Stainless steel construction ensures a long life. D 4509

$28.50

Heavy-Duty Spring

Designed for larger antennas. Heavy-duty spring with 1/2" thread to suit D 4517 base. D 4082

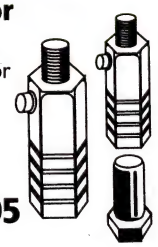
$39.95

1/2" to 5/16" Adaptor

Adapts 1/2" female to 5/16" male thread, ie. standard 5/16" thread antenna to D 4517 base. D 4518

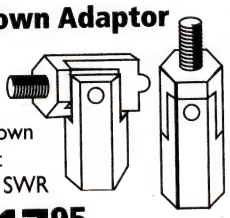
$14.50

Quick-Release Adaptor



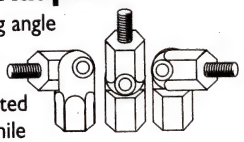
Saves your antenna from being stolen! This 5/16" thread adaptor allows you to remove your antenna from its mount with a quick release button. Adjust antenna SWR after fitting.
D 4501 **$18.95**

Folding Snap-Down Adaptor



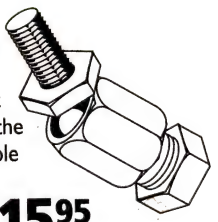
For standard 5/16" threads, this adaptor allows CB and similar antennas to be folded down in car parks etc, without removal. Adjust antenna SWR after fitting.
D 4506 **$17.95**

Folding Angle Adaptor



A medium-duty folding angle adaptor which allows 180° movement so the base can be mounted at almost any angle while the antenna remains vertical. Suitable for small to medium whips.
D 4507 **$16.95**

Slope Adjuster

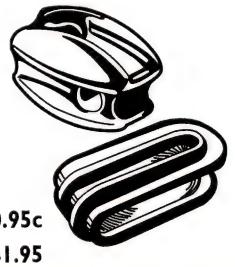


Allows you to swivel the antenna up to 30° so the correct vertical alignment can be maintained when the base is on an angle. Suitable for small whips.
D 4508 **$15.95**

4m Coax Lead

Four metres of quality coaxial cable fitted with spade connectors on one end and a PL-259 plug on the other.
D 9012 **$10.95**

Egg Insulator



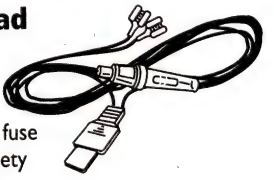
Tough egg insulator for antenna arrays and guy wires.

Small nylon D 5300 **0.95c**
Medium nylon D 5302 **$1.95**

15m Coax Lead

Ideal for UHF base antenna installations. 15m of quality RG-213 coax cable fitted with a PL-259 plug on one end and an 'N' type plug on the other.
D 9014 **$89**

DC Power Lead



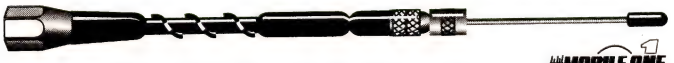
There are two versions of the DC power lead, both with an in-line fuse holder, to suit a variety of old and new CBs.

2 Pins: Suits early DSE and early Pearce Simpson CBs
D 9006 **$9.95ea**
3 Pins: Suits early Midland and late Uniden CBs
D 9001 **$7.95ea**

1m Coax Patch Lead

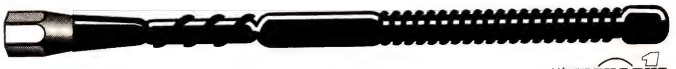
A handy coax patch lead with a moulded PL-259 plug on both ends.
D 9010 **$8.95**

27MHz Mobile Antennas



28cm Adjustable Tip Antenna

An extra-low profile helps avoid the usual height restrictions associated with most antennas. The adjustable tip ensures accurate tuning and allows you to move the antenna from vehicle to vehicle. For short range communication only. Standard 5/16" female termination.
Model RMAT
D 4630 **5 YEAR WARRANTY** **$19.95**



32cm Mini Whip Antenna

One of the toughest CB antennas around, and just 32cm long! Its precision-tuned coil is wound onto an almost indestructible fibreglass former and sealed with a black coloured heatshrink coating. The flexible spiral tuning stub can also be cut for fine tuning. For short range communication only. Standard 5/16" female termination.
Model RDRM
D 4635 **5 YEAR WARRANTY** **$19.95**

50cm Mini Whip Antenna

At just 50 centimetres, this ultra-slim, top-loaded helically-wound antenna won't give you much wind noise or many height problems, but is ideal for short to medium range communications e.g. 4WD groups. Comes with a standard 5/16" female thread.
Model DX-120FW
D 4073 **5 YEAR WARRANTY** **$15.95**

90cm Mini Whip Antenna

A mere 90cm high, but it gives you big performance compared to the shorter antennas listed at left. This well-constructed flexible helically-wound mini whip comes with a standard 5/16" female thread and uses the easy 'snip to SWR' tuning method. Coated in black heatshrink.
Model DX-136FW
D 4072 **5 YEAR WARRANTY** **$16.95**

90cm Bush Bandit Adjustable Tip Antenna

A solid, top-loaded helical antenna with adjustable length tip for easy SWR adjustment. It remains upright even at highway speeds, for a more consistent signal. The standard 5/16" female thread will fit most antenna mounts.
Model DX-435
D 4420 **5 YEAR WARRANTY** **$24.50**

Fold-Down 90cm Helical Antenna

A precision-wound helical whip with Mobile One's exclusive locking snap-down hinge built into the antenna's base. It's ideal for those installations where the antenna needs to be folded down to clear overhead obstructions (eg. when entering a car park or garage). Standard 5/16" female termination. Model DX-136LSD
D 4090 **5 YEAR WARRANTY** **$32.50**

90cm Helical Antenna Pack

MOBILE ONE

This 90cm whip antenna pack, complete with lead assembly, is an inexpensive way to buy, saving you over 15% on the individual component prices. The pack includes a high-quality, flexible helically-wound 90cm long mini whip antenna, together with a moulded base with 3.6m coaxial cable and a PL-259 plug attached.

D 4027 **5 YEAR WARRANTY** **$29.95**

1m 'Superhelical' Antenna

MOBILE ONE

This antenna features a 'spaced triaxial spiroid' winding on a strong fibreglass rod, producing greater efficiency and a wider SWR bandwidth from the low-profile antenna. It's flexible and can be roof or gutter mounted. Coated with tough long-wearing translucent polyolefin heatshrink for total weather protection. Standard 5/16" female termination.

Model DX-140SH

D 4092 **5 YEAR WARRANTY** **$29.95**

1.5m Helical Antenna

MOBILE ONE

A very popular antenna that provides excellent mobile performance due to its greater length and top loaded helical design. This 1.5m constant diameter whip antenna fits most standard bases and it's helically wound with a tough black heatshrink coating. Just snip to adjust the SWR. Standard 5/16" female termination.

Model DX-160CD

D 4074 **5 YEAR WARRANTY** **$17.95**

1.5m Helical Antenna Pack

BENELEC

The most popular of all our CB antennas, providing high performance in a compact package. Comes complete with a 1.5m helically-wound whip antenna, antenna base and 3.6m coax fitted with a moulded PL-259 plug.

D 4076 **5 YEAR WARRANTY** **$29.95**

1.5m 'Superhelical' Whip Antenna

MOBILE ONE

This continuously-loading helical whip is wound onto a rugged fibreglass former with a constant turn winding, and exhibits a radiation pattern similar to a full-sized quarter-wave whip for greater range. A tough polyolefin heatshrink covering ensures excellent weatherproofing. Standard 5/16" female termination.

D 4094 **5 YEAR WARRANTY** **$38.50**

1.45m 'Monster Stick' Helical Antenna

MOBILE ONE

Constructed with thick winding wire on a sturdy fibreglass rod and coated with a tough UV-resistant polyolefin heatshrink coating. The Monster Stick provides excellent performance in an antenna that's not too long. Uses the adjustable tip tuning system. Standard 5/16" female termination.

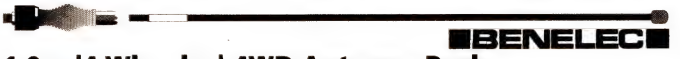
D 4414 **5 YEAR WARRANTY** **$49.95**

1.5m 'Superhelical' 4WD Antenna Pack

MOBILE ONE

The complete medium-duty antenna pack! Easy to install and ideal for most 4WDs, it contains a rugged 27MHz 1.53m 'Superhelical' medium to long-range antenna, plus a solidly-constructed stainless-steel spring, heavy-duty base, cable and plug.

D 4088 **5 YEAR WARRANTY** **$79.95**

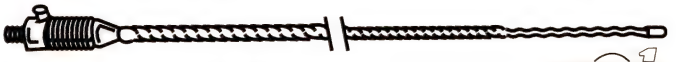


BENELEC

1.0m '4 Wheeler' 4WD Antenna Pack

Good performance and rugged construction make the '4 Wheeler' a great choice for 4WD vehicles where a longer antenna is not practical, either aesthetically or because you'll be driving in heavily timbered country. Includes an oversized braid over 1/2" fibreglass whip with polyolefin heatshrink coating, a heavy duty spring to damp out vehicle vibrations, & a rugged base with SO-239 socket for easy coax connection.

D 4083 **5 YEAR WARRANTY** **$139**



1.8m Heavy-Duty Whip Pack

MOBILE ONE

A strong and flexible tapered fibreglass rod, it's wound with copper braid rather than the usual solid wire, and coated with rugged polyolefin heat-shrink tubing, making this efficient antenna ideal for most 4WD operation. A solid spring is attached to the unbreakable mounting base to absorb most of the shock and vibration from the antenna. Requires a 1/2" mounting hole. Coaxial cable with a PL-259 plug is supplied.

D 4078 **5 YEAR WARRANTY** **$155**

27MHz Base Station Antennas

1/2 Wave CB Base Antenna

MOBILE ONE

This antenna provides a low angle of radiation for longer range, and solid aluminium construction to ensure a long life. It is easy to erect, easy to SWR in, and best of all, it's not just for CB! Use it at your surf club, boating club or adapt it for the 28MHz amateur band.

D 4427 **5 YEAR WARRANTY** **$89.95**

Station Master II CB Base Antenna

NEW FOR '99

This half-wave CB base station antenna uses high tensile T-81 grade aluminium tubing and a sealed base section for excellent long-term performance. Its broadband design provides over 2MHz bandwidth with SWR <1.5:1, so it is ready for both CB and marine CB operation without tuning. Uses standard SO-239 socket for coax connection, and comes with U-bolt mounting brackets.

D 4425 **$89.95**

UHF CB Antennas

1/4 Wave Mobile Antenna

MOBILE ONE

An ultra-flexible 1/4 wave UHF CB antenna made from tough stainless-steel wire in a protective plastic sheath. Install it on any standard 5/16" UHF antenna base. Approx. 135mm long.

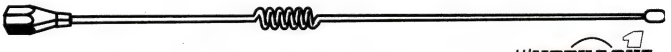
D 4008 **5 YEAR WARRANTY** **$9.95**

4.5dB Fibreglass Antenna

MOBILE ONE

This 5/8 over 1/4 wave collinear antenna design uses copper braid over a fibreglass rod with heatshrink coating to provide outstanding performance out of just 60cm of antenna. Fits any standard 5/16" UHF antenna base.

D 4013 **5 YEAR WARRANTY** **$18.50**

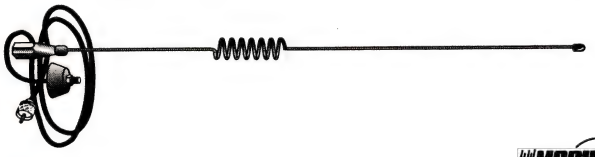


4.5dB Stainless-Steel Whip Antenna

MOBILE ONE

A state-of-the-art stainless-steel whip antenna with a low angle-pattern and at least 4.5dB gain. All components are made of brass and stainless-steel for total protection against the elements, making it ideal for farming, industrial and heavy transport applications. Standard 5/16" female termination. Approx. 630mm long.

D 4006 **5 YEAR WARRANTY** **$19.95**

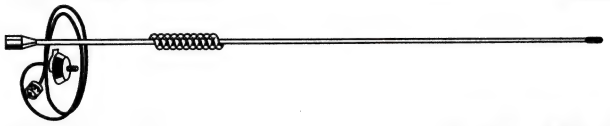


UHF CB 4.5dB Antenna Pack

MOBILE ONE

A high-quality stainless-steel 4.5dB mobile antenna with a UHF antenna base and fitted lead. Offering exceptional value, this rigid antenna with standard 5/16" thread is durable and easy to install. Includes 3.6m of high-quality Mil-Spec RG-58C/U coax fitted with a PL-259 plug and comes with instructions.

D 4000 **5 YEAR WARRANTY** **$29.95**



UHF CB 4.5dB Antenna Pack

BENELEC

A highly flexible stainless-steel 4.5dB mobile antenna with UHF base and lead. The whip is black powder coated and uses 2 hex screws to secure it firmly into its ferrule. Includes 3.6m of Mil-Spec RG-58C/U coax fitted with a PL-259 plug, plus allen key and instructions.

D 4002 **5 YEAR WARRANTY** **$29.95**

UHF CB 1/2 Wave Antenna

MOBILE ONE

A compact, unity-gain antenna for short-medium range uses that stands only 36cm high. Because it's ground-independent, you can mount it almost anywhere on your vehicle and get a clean, omni-directional transmission pattern. Ideal for vehicles and boats with fibreglass roofs. Chromed brass and flexible black PVC construction with a 3.6 metre coax lead and PL-259 plug.

D 4020 **5 YEAR WARRANTY** **$34.95**

6dB Gain 'Mega Blaster' Antenna

MOBILE ONE

Get high performance and maximum mobile range from your UHF CB with the 'Mega Blaster' antenna. It stands just 1.2 metres high and the multi-element, collinear design using a strong fibreglass rod and polyolefin heatshrink coating gives a solid 6dB gain. Mount it on a ground-plane area such as your vehicle roof with a standard UHF base (D 4516) for best results. Can also be used as a high performance UHF scanning receiver antenna.

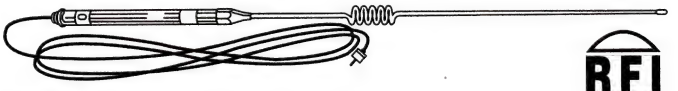
D 4007 **5 YEAR WARRANTY** **$59.95**

6.5dB Rugged Elevated Feed Antenna

MOBILE ONE

Ideal for applications such as 4WD, heavy transport, mining or industrial uses, this rugged antenna uses a 3.2mm diameter stainless steel whip which will remain vertical at high vehicle speeds for optimum performance. Each antenna is pre-tuned for 465-485MHz operation and its ground-independent design provides a low angle of radiation and minimum 6.5dB gain for longer range. Comes with 3.6m of RG-58C/U coax cable and PL-259 plug. Approx. 810mm long.

D 4028 **5 YEAR WARRANTY** **$69.95**

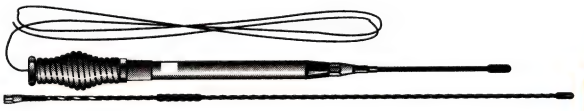


6.5dB Elevated Feed Mobile Antenna

RFI

This tough elevated-feed, ground-independent UHF mobile antenna can be used in virtually any mounting position (providing up to 6.5dB gain when gutter mounted). It uses a stainless-steel whip with a black Dura-Coat finish and triple chrome-plated brass elevated feed choke. Comes with 3.6m of coax and PL-259 coax plug. Adjustable over the 470-490MHz range, so it can be used for UHF CB or UHF commercial applications.

D 4023 **$75**



NEW FOR '99

3dB & 6dB Elevated Feed Mobile Antenna

This rugged ground-independent mobile antenna is supplied with both 3dB and 6dB antennas so you can choose a shorter antenna for local coverage, or the longer antenna for maximum range. A quality spring is included to help damp out mobile vibration. The choke assembly uses a strong stainless-steel tube for longer life. Includes 5.0m low-loss coax cable and PL-259 plug.

D 4029 BENELEC **$99.95**

UHF CB Mini Hand-Held Antenna

MOBILE ONE

Need a really small antenna for your UHF CB application, or just need to ensure your radio only covers a compact local area to reduce chances of interference? This rugged mini antenna is approx 80mm long and is fitted with a quality TNC plug to suit most modern handhelds, and is covered in a long-life black colour heatshrink coating.

D 4204 **5 YEAR WARRANTY** **$29.95**

UHF 1/2 Wave Hand-Held Antenna

MOBILE ONE

Use this antenna to help improve the range of your UHF CB handheld transceiver. A superb half-wave antenna (3dB gain) which is ideal for the latest handheld CBs that use TNC sockets. It's approximately 26cm tall, highly flexible and has a quality TNC connector for simple screw-on convenience.

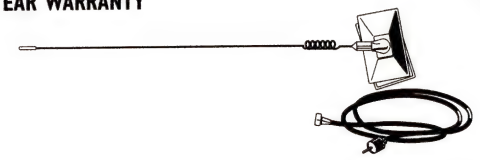
D 4202 **5 YEAR WARRANTY** **$29.95**

UHF 1/2 Wave Hand-held Antenna

MOBILE ONE

A superb half-wave antenna (3dB gain) which is ideal for handheld UHF CBs. It's just 26cm tall, highly flexible and has a quality BNC connector for clip-on, clip-off convenience. Can help improve the range of handheld UHF CBs by providing slightly higher gain than the antenna normally supplied with the radio. Also suitable for use with most scanning receivers for improved UHF reception.

D 4208 **5 YEAR WARRANTY** **$29.95**



UHF Glass-Mount Antenna Pack

ZCG SCALAR

A high-quality glass-mounted antenna that looks similar to those used for cellular phones. Easy-to-install and does not require drilling. Can be mounted on the windscreen or rear window. With an adjustable frequency range of 390-520 MHz, it's ideal for UHF CB, amateur or UHF commercial users. Provides 3dB gain, and has an average power rating of 50 watts, plus it comes with 4.5m coax cable and a PL-259 plug.

D 4019 **$78**

4.5dB Gain UHF Base Antenna

D & G Antennas

Get on air quickly with this compact, easy to assemble UHF CB base station antenna. Ideal for limited space applications, it features rugged aluminium construction, and provides 4.5dB gain for medium to long range communications. A standard SO-239 socket is built into the bottom of the antenna for easy coax connection. Supplied complete with ground-plane radials for a clean radiation pattern, as well as U-bolt mounting hardware.

D 3010 **5 YEAR WARRANTY** **$49.95**

6dB Gain Base Antenna

MOBILE ONE

Get good range from your UHF CB with this high gain (6dB), 2.4m long, omni-directional base-station antenna. The high quality white fibreglass radome and strong base section aluminium tubing construction will ensure a long life, even in seaside installations. It's fitted with an N-type socket for minimum signal loss and it's great value! Recommended mounting brackets 2pcs D 5170.

D 4011 **5 YEAR WARRANTY** **$75**

6dB Gain Miniature Base/Mobile Antenna

MOBILE ONE

A compact 6dB gain collinear ground-independent antenna designed for use on 4WDs, boats and base stations, but commonly seen mounted on the bull-bar of a 4WD vehicle, where it will provide excellent performance. It comes complete with a slim white colour fibreglass radome antenna, extra heavy-duty spring mount to help reduce vibration damage to the antenna, plus 3.6m coax cable with connectors.

D 4098 **5 YEAR WARRANTY** **$149.95**

COL6M replacement antenna suit D 4098. D 4099 **$89.95**

9dB Gain Base Antenna

ZCG SCALAR

One of our best omni-directional UHF CB base antennas, it has high 9.7dBi gain for improved range, together with a rugged anodised aluminium-tube base and fibreglass radome construction for long life. At 3.0 metres tall, it uses a ground-independent design and has an 'N' type coax socket for minimum signal loss. 100W power rating, with SWR<1.5:1. Recommended mounting brackets 2pcs D 5170.

D 3005 **$139**

12dB Gain Base Antenna

ZCG SCALAR

Our highest performance omni-directional UHF CB base antenna, its 12dBi gain makes it ideal for installations where maximum range is required. A heavy duty 32mm diameter anodised aluminium support tube and high quality fibreglass radome construction allow this ground-independent antenna to be used in rural, industrial or marine areas. Its 3.4m tall, weighs just 1.3kg, and uses an 'N' type coax socket for minimal signal loss. 100W power rating, with SWR<1.5:1. Recommended mounting brackets 2pcs D 5170.

D 3008 **$165**

Accessories for UHF CB Base Antennas

Antenna mounting bracket	D 5170	**$9.95ea**
15m RG-213 N to PL 259 cable	D 9014	**$89**

Marine Antennas

Ground-Independent 27MHz

MOBILE ONE

This 1.8m long marine antenna doesn't require a ground-plane for good performance. Ideal for wood or fibreglass boats, and designed for easy whip removal, it comes with a swivel deck-mount. The whip itself is helically wound and is covered in a tough U.V. resistant white polyolefin heatshrink material. Power handling is 25W (max) with typical VSWR of 1.5:1 over the 27.7 to 28MHz range. The antenna may require trimming when used on metal boats. Supplied with 3.6m of coax and PL-259 plug.

D 4069 **5 YEAR WARRANTY** **$69.95**

VHF Marine Antenna

MOBILE ONE

This 95cm long ground-independent antenna has been factory pre-tuned for best performance on fibreglass and wooden boats. It covers the VHF marine band with less than 1.5:1 VSWR. Power rating is 25 watts and it provides an omni-directional transmission pattern. A sturdy swivel deck-mount is supplied along with 3.6m of coax and a PL-259 plug.

D 4014 **5 YEAR WARRANTY** **$69.95**

'ScanDucky' Handheld Scanner Antenna

The 'ScanDucky' is a wideband antenna designed for use with handheld scanners. It provides improved reception capabilities compared to the standard antenna supplied with most handheld scanners. Approximately 400mm long and moderately flexible, the ScanDucky is fitted with a BNC plug which suits most scanners.
Covers 25MHz to 1300MHz.
D 4433 **5 YEAR WARRANTY**

$29.95

Compact Mobile Scanner Antenna

Improve your portable or mobile scanner's performance with this compact antenna. The 'Scantenna' covers VHF/UHF bands from 70MHz to 525MHz including VHF and UHF commercial, VHF aircraft and UHF CB channels. It's fitted with a standard 5/16" female thread (D 4516 base recommended) and is protected by a strong white heatshrink covering. Approx. 700mm long.
D 4434 **5 YEAR WARRANTY**

$19.95

BENELEC

Wideband Mobile Scanner Antenna

This wideband helical-antenna suits most modern scanners and covers the HF/VHF/UHF bands from 21MHz to 900MHz. It's approx. 900mm long and is fitted with a standard 5/16" female thread (D 4516 base recommended). Covered in strong white heatshrink.
D 4436 **5 YEAR WARRANTY**

$24.95

VHF/UHF Universal Antenna Kit

A 520mm stainless-steel whip ideal for mid-band VHF to UHF (approx. 120MHz to 500MHz). It comes with cutting chart and a 5/16" coaxially-fed antenna base which fits most mounts. Complete with 3.6m of quality RG58C/U coaxial cable and a PL-259 plug.
D 4025 **5 YEAR WARRANTY**

$29.95

Mobile Scanner/Transceiver Antenna

The 'Bandspanner' not only covers the 25-1300MHz receive scanning range, but also allows transmissions on UHF CB, several commercial bands, as well as the VHF Air band. It's an extremely effective mobile scanner antenna, providing high efficiency through the use of a wideband UHF whip with helical traps. Standard 5/16" thread.
(D 4516 base recommended).
D 4437 **5 YEAR WARRANTY**

$32.95

Base/Portable Scanner Antenna

Increase your scanner's coverage with this quality 1.2m long indoor antenna that covers the major scanner bands from 25MHz to 1300MHz. It's easy-to-mount with an inbuilt eye-hook, or it can be temporarily mast-mounted outdoors with optional clamps. Comes fitted with 3.5m of coax and a BNC plug allowing easy connection to most modern scanners.
D 4432 **5 YEAR WARRANTY**

$69.95

'Bandspanner Base' Scanner antenna

Built inside a weatherproof radome, this 1.5m long 'Bandspanner Base' antenna performs well across the main scanner bands between 25 and 1300MHz and is excellent around the 450-500MHz UHF band. The metal base section allows for easy base station installation using optional clamps (hose-clamps or U-bolts) and an SO-239 socket in the base also allows easy coax connection.
D 4440 **5 YEAR WARRANTY**

$79.95

BENELEC

Scanner Discone Antenna

This quality Australian-made 12 element scanner discone antenna provides excellent receive performance across the entire 60 to 1000MHz range, making it ideal for use with many of today's wide-band scanning receivers. Uses stainless steel rods as antenna elements, and comes complete with stainless-steel hose clamps for mounting the antenna to your mast. An SO-239 socket in the base of the antenna allows easy coax connection.
D 4845 **5 YEAR WARRANTY**

$99.95

Diamond D-130J Discone Antenna

Our most popular discone antenna! This quality 16 element Japanese antenna covers the frequency range 25-1300MHz and comes complete with stainless steel mast-mounting hardware and simple to follow instructions. It's easy to assemble and install, and while the extensive stainless-steel construction makes it extremely durable, the wide frequency coverage means that it's ideal for use with scanning receivers and it can also be used with transmitters up to 200W PEP for the 6m, 2m, 70cm and 23cm amateur bands. Uses an SO-239 coax socket for easy coax connection.
D 4840

$179

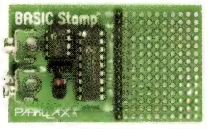
Discover the exciting world of Electronics with a kit from Dick Smith Electronics

Are you interested in electronics? Does the idea of constructing your own circuits and functional gadgets appeal to you?
Well then Dick Smith Electronics can help you. We supply a fantastic range of kits from 'cybugs' to amplifiers, from special effects generators to parking radars. These kits are suited to all levels of expertise from beginners to the more advanced. See for yourself!

Stamps

Basic Stamps are small computers that run PBASIC programs, and communicate with other electronic devices. Their simple language and easy interfacing make BASIC Stamps ideal for many applications, for the hobbyist and for education. The Stamp 1 & 2 are 14 and 24-pin modules, with the circuitry packed onto a small board. These modular BASIC Stamps have corresponding carrier boards for easy interfacing to PCs, power supply and prototyping. BASIC Stamps connect your computer's parallel or serial port for programming. After being programmed they can be connected directly to buttons, LEDs and other TTL-level devices, and with extra components, to non-TTL devices such as relays.

BASIC Stamp Rev.D

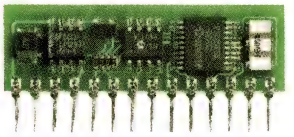


- Complete PC board with prototype area
- Runs PBASIC programs with 8 I/O lines
- 256 bytes EEPROM (program and data)
- 80 instructions maximum program length
- Parallel port PC interface
- Insert into a carrier board (K 1402), connect with cable and program using and IBM PC running DOS
- 9V DC power required
- 4MHz oscillator
- Includes 9V DC battery clip

K 1400

NEW FOR '99 **$79**

BASIC Stamp 1 Revision E



- Runs PBASIC programs with 8 I/O lines
- 256 bytes EEPROM (program and data)
- 80 instructions maximum program length
- Parallel PC interface
- Insert into a carrier board (K 1402), connect with cable and program using and IBM PC running DOS
- 9V DC power required
- 4MHz oscillator

K 1401

NEW FOR '99 **$79**

Stamp-based Developer's Board

- Features timer circuit that utilises the features of the Stamp microcontroller*
- Features LEDs and piezo buzzer to indicate events
- Multiple inputs for design flexibility
- Includes relay, components and multi-purpose PCB
- Power supply: 12V DC

** Stamp Microcontroller not included*

K 1408

NEW FOR '99 **$24.95**

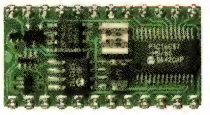
BASIC Stamp Development Kit

- Includes manuals for Stamp 1 and 2, cables for Stamp 1 and 2 programming as well as software to get you started including Stamp 2 Windows software
- Certificate for 3 months free technical support

K 1405

NEW FOR '99 **$149**

BASIC Stamp 2



- Features 16 I/O lines
- 2048 bytes EEPROM (program and data)
- 500 instructions maximum program length
- Insert into carrier board (K 1403), connect with a cable and program using any IBM PC running DOS
- Serial PC interface
- 9V DC power required
- 20MHz oscillator

K 1404

NEW FOR '99 **$109**

Programming Cable for Stamp 1

K 1407

NEW FOR '99 **$19.95**

BASIC Stamp Jumper Connectors

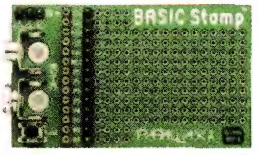
Pack of 10.

K 1406

NEW FOR '99 **$9.95**

BASIC Stamp 1 Carrier Board

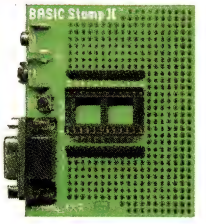
K 1402



NEW FOR '99 **$39**

BASIC Stamp 2 Carrier Board

K 1403



NEW FOR '99 **$49**

Electronics for Beginners

Used by schools and colleges throughout Australia!

Funway 1 kits are our best selling electronic kits for beginners. Used in schools and colleges across Australia, these kits teach the basics about electronics in a fun and practical way. Funway 1 assumes you know nothing about electronics and goes through the basics by showing you the components and how they piece together in circuits. It also shows you how to go on with further experiments with your circuits when they are finished. A perfect idea for kids, these kits can entertain and teach for hours. For safety there is no soldering required and no dangerous voltages to play with. So enjoy!

Please note: These kits do not include instructions. All information is published in the Funway 1 Book (B 2600), which is necessary before construction can begin on any kit.
Not suitable for children under 3 years of age, contains small parts.

Book Only **$4.95**
B 2600

Funway 1

Spring Terminals (optional)

Designed especially for Funway 1 kits. Makes connecting and disconnecting components a breeze. K 2602

$3.75pk

Funway 1 Project Kits 1-10

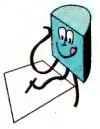
- Supplied with all components necessary to build any one of the first ten projects
- No soldering required, so parts can be reused to build the next project. All projects are battery powered so they're safe, even for the youngsters!

K 2600 **$13.50**

1. Continuity Indicator

Just like a multimeter, it will show you if you have a complete circuit or an open circuit. A Light Emitting Diode (LED) will glow if the circuit is complete.

2. Transistor Tester



As well as telling you if your transistor is okay, it shows you how transistors work.

3. Water Indicator

Are your plants thirsty? This simple circuit will tell you how much water is in the soil.

4. Light/Dark Indicator

Using a light dependent resistor, it will light an LED if light falls on it. This type of detector is used in some alarms.

5. Flasher

Want to add flashing lights to a model train layout? This project will do it for you!

6. Electronic Siren

A mini version of a police car siren. Fantastic to add to toys.

7. Music Maker

Make your own electronic organ and play your own tunes.

8. Dog & Cat Communicator

Dogs and cats can hear sounds that human beings cannot. With this great dog and cat communicator, you might be able to 'talk with the animals'!

9. Decision Maker

As used by top executives and politicians. Just press the button and it will decide 'yes' or 'no'!

10. Morse Code Indicator

Amateur radio operators send Morse Code all over the world. Now you can learn the code too and send secret messages.

Funway 1 Project Kits 11-20

- Contains the more specialised components required to build any of the last ten projects (11-20) in Funway 1
- There is no soldering required and no dangerous voltages
- You will also need the K 2600 (1-10) kit above and B 2600 book to build these projects

K 2610 **$13.50**

11. Sound Effects Generator

Ever wondered how those sound effects are made in the movies? Build this and you can make some of your own!

12. Crystal Set

Free radio! No batteries to buy, nothing to turn off. Listen in to your favourite station!

13. One Transistor Amplifier

Build your own amplifier. Can be used with the Crystal Set and other projects!

14. Beer Powered Radio

Yes, it actually runs on beer or fizzy drink! Listen in but don't drink the battery.

15. Two Transistor Amplifier

Even more power, enough to drive a speaker so you can listen without headphones.

16. The Simplest Transmitter in Town

Allows you to transmit Morse Code across the room.

17. Voice Transmitter

Imagine being able to transmit your voice to a radio set! This kit makes it easy.

18. CB Radio Receiver

Listen in to the truckies and other CBers, you don't have to spend a fortune on a CB.

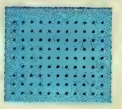
19. Amateur Radio Receiver

A radio receiver to listen in to ham operators and other stations in the 2-6MHz bands.

20. Radio Booster Amplifier

A radio frequency amplifier to give other radios even better reception!

Plastic Breadboards



Expand your Funway 1 projects into bigger and better things with extra plastic breadboards.

H 4050 **$3.25**

With 20 new projects to try out

Funway 2 takes over where Funway 1 leaves off!

These projects are all built the modern way, on printed circuit boards, which means all components are soldered into position, so you'll need a soldering iron. Funway 2 teaches you how to solder, how to avoid the pitfalls and how to use a multimeter. The projects have been specially chosen to be practical and they're battery operated and very safe. Plus, there are printed labels to make your circuits look really professional.

Parents Note All Funway kits use battery power, so there are no dangerous voltages. However, Funway volume 2 involves soldering, which may require supervision if attempted by younger children. Not suitable for children under 3 years of age – contains small parts.

Book Only **$6.95**
B 2605

Funway 2

FUNWAY 2 KITS: Something here for everyone! Simple, economical and fun!

1. Flasher

- Great for electronic jewellery
- Or use it as a burglar warning light, etc – the choice is yours!

K 2621 **$5.95**

2. Ding Dong Doorbell

- Sounds just like an old fashioned doorbell
- A simple project to build for your home

K 2622 **$9.95**

3. Morse Code Trainer

- Build this simple trainer and learn about morse code
- Now you can tap out those secret messages to your friends

K 2623 **$19.50**

4. Universal Timer

- Are the eggs too hard? Then time them with this handy little device.
- Can be set for as little as a few seconds to about 15 minutes

K 2624 **$12.95**

5. Electronic Dice

- Just as much fun using it as it is building it
- It really randomly picks – there's no cheating with these dice!

K 2625 **$10.95**

6. Mini Organ

- Play a tune – it's easy!
- Uses the back of the PCB as the keyboard

K 2626 **$15.80**

7. Pocket Transistor Radio

- A fun way to teach yourself about the fundamentals of radio
- Build your own receiver and then have fun using it

K 2627 **$14.95**

8. Touch Switch

- Ever wondered how those lift-buttons work? Build this touch switch and you'll be able to work it out
- A variety of functions clearly explained

K 2628 **$10.50**

9. Mosquito Repeller

- Do mozzie repellents really work?
- Build this and you'll find out how and why
- You won't hear it but the mozzies certainly will! Based on university research

K 2629 **$12.50**

10. Audio Amplifier

- Use it to make the intercom (Project 18), or as a general purpose amplifier
- It's handy and has great sound output

K 2630 **$10.95**

11. Wireless Microphone

- Transmits to any standard FM radio – even one in another room or next door

K 2631 **$10.95**

12. Light Activated Switch

- Useful in many security applications around the home
- If a light goes on, the switch activates
- You can even use it to trigger a burglar alarm

K 2632 **$8.95**

13. Metal/Pipe Locater

- Extremely handy for locating pipes, wires, etc. in walls before drilling holes
- A simple circuit that's effective

K 2633 **$10.50**

14. Sound Activated Switch

- Activated by sound
- Use it as a telephone bell extender without breaking phone regulations

K 2634 **$13.50**

15. Home/Car Alarm

- By constructing this simple circuit you will learn the basics of alarms
- Use it to protect your home or car

K 2635 **$12.95**

16. Electronic Siren

- Just what you need with the alarm above
- Also makes a terrific sound effects circuit

K 2636 **$10.95**

17. LED Level Display

- Hook it up to your stereo and it can warn you of dangerous overloads
- Looks great too! LEDs light up in time to the music!

K 2637 **$12.50**

18. Intercom Unit

- Build your own intercom and use it around the house
- Practical and simple to build
- Try it with the intercom amplifier

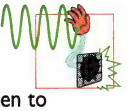
K 2638 **$16.95**

19. LED Counter Module

- A perfect introduction to integrated circuits
- Can be adapted to a huge variety of counting applications
- Fun to build

K 2639 **$18.50**

20. Shortwave Receiver



- You'll be able to tune into a variety of shortwave stations
- Or with simple modifications, listen to emergency services and amateur broadcasts!

K 2640 **$14.95**

Please Note: these kits DO NOT include instructions. All information is published in Funway 2 Book (B 2605) - which is necessary before construction can begin on any kit.

Funway 1 Gift Box

As used in schools and colleges

Schools and colleges throughout Australia use Funway 1 as a practical and fun educational aid. With no dangerous voltages or soldering, the Funway 1 Gift Box makes an ideal gift for children or adults. Comes with all components, our specially manufactured reusable plastic 'breadboard' and the Funway 1 Book.

K 2605 **$36.95**

Funway 1 Into Electronics Starter Pack

20 exciting projects to build

Want to learn about electronics, but haven't a clue about where to start? Then the Funway 1 Starter Pack is for you! It comprises 20 fascinating kits, is completely safe (no soldering required) and assumes no prior knowledge of electronics. Includes:

- Funway 1 book
- Morse keyer
- Side cutters
- 2 plastic breadboards
- Components
- Screwdriver
- 9V battery

K 2607 **$59.95**

Funway 2 Gift Pack

Everything the beginner needs, including Funway 2 book, soldering iron, solder and 9V battery. Wireless microphone kit to transmit voice or music to a standard FM radio.

K 2620 **$39.95**

World's Simplest Motor

It's easy and fun to assemble. Just wind the small diameter coil and place across the convenient stand. Uses 1 x D cell battery.

K 1046 **$9.95**

Medium Wave Radio Kit

Now kids (aged 8 and over) can construct their own radio! Requires just 1 x AA battery and comes complete with all parts.

K 1016 **$14.95**

Electro-mechanical Kits

Hours of creative fun for kids. Includes pre-cut, pre-drilled wood, motor and battery clip. Choose from a walking dinosaur, a racing car that really goes or a moving robot

Dinosaur	K 1250
Racing Car	K 1252
Robot	K 1251

$19.50 ea

Crystal Radio

Learn the similarities and differences between crystal and regular radio. Build your own crystal radio and then have fun with it. No power required, comes complete with crystal diode, coil tube, connecting wire, base and earphone.

K 1015 **$22.50**

Electric Motor Kit

With motorboat!

Build an electric motor and actually install & run a model boat. Ideal for junior boat designers from 8 years up. Teaches you the basic principles of electromagnetism. Uses 1 x D cell battery.

K 1010 **$22.50**

Digital Multimeter

With 3.5 digit display, comes supplied with all components, hardware, PCB, multimeter, plastic case, LCD display, 9V battery and test leads Measures voltage AC/DC, DC current to 10amps, resistance 200R to 2000K. Features diode, continuity and transistor test.

K 1044 SILICON CHIP Jun '95 **$29.80**

DISCOVERY SERIES

Discover the exciting world of electronics with our Discovery series!
All PCBs come solder-masked with screened component overlays.
Each kit is supplied complete with easy-to-follows instructions.

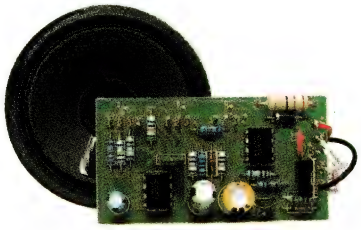
Mini Stereo Amp

- Can be used for either stereo or bridge (mono) applications
- Power source required: 9 volt battery
- Supplied with components and PCB
- Case optional (use H 2855)
- PCB size: 22mm x 50mm

Specifications

Power supply range: 1.8 to 15 volts
Frequency response
Stereo: 50Hz – 130KHz into 8 ohms
Mono Bridge: 70Hz – 20KHz into 8 ohms
Sensitivity
Stereo: 30mV input for 1W/ch at Vcc=9V
Mono Bridge: 80mV input for 2W output at Vcc=12V

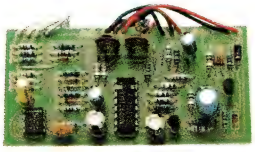
K 2806 **$12.95**



Siren Generator

- Create four different siren sounds
- Power source required: 6 or 9 volt battery
- Supplied with components, PCB and hardware such as switches, battery snap and speaker
- Case optional(use H 2853)
- PCB size: 33mm x 62mm

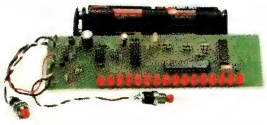
K 2801 **$19.95**



Wave Form Generator

- Frequency range: 10Hz to 100KHz
- Both amplitude and frequency are voltage controlled
- Combine two of these to make an audio sweep generator
- On board voltage regulation ensures good stability
- Power source required: 9 volt battery or any DC supply between 8.5 and 15 volts
- Supplied with components, PCB and hardware such as pots and switches
- Case optional (use H 2851)
- PCB size: 43mm x 87mm

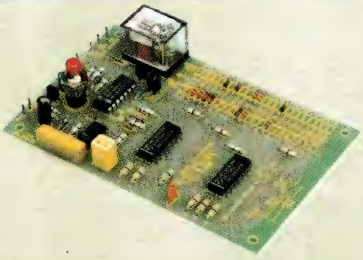
K 2802 **$21.50**



Flash, Dash or Crash

- An exciting game of patience, coordination and skill
- Uses 16 LEDs which operate in sequence
- The game requires you to 'climb' the ladder of LEDs by pushing a button
- Has automatic power cut-off
- Power source required: 4 x AA batteries
- Supplied with components and PCB
- Case optional (use H 2851)
- PCB size: 43mm x 150mm

K 2800 **$22.50**

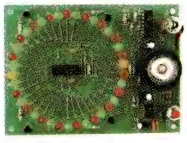


Multi-Timer Module

- Timing range between 0.1 sec and 19.4 days
- Can be configured for single cycle operation or for continuous repeat until reset
- Power source required: 9V – 12V DC
- Supplied with components and PCB
- Case optional (use H 2851)
- PCB size: 74mm x 113mm

K 2807 **$26.95**

Roulette Wheel



- Just like running your own mini casino
- Has two zeros (0 & 00) and 36 numbers
- Simply press the button to set the ball rolling
- Makes a clicking sound as each number is passed, imitating a ball rolling over pockets
- Power source required: 9 volt battery
- Supplied with components, PCB and necessary hardware such as mini speaker and switches
- Case optional (use H 2852)
- PCB size: 91mm x 124mm

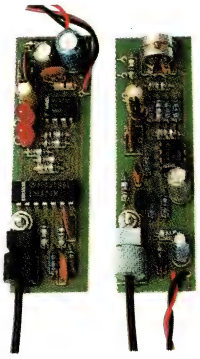
K 2804 **$32.50**

Parallel Port Interface

- Connects to a parallel centronics printer port on your computer
- Able to sense data, process it and use the results to control relays, motors, solenoids etc
- Can monitor 10 analogue voltages
- Drives 8 digital outputs
- Generates 2 variable voltages
- Includes simple programs that can be manipulated to suit your needs
- Power source required: 9 volt battery and DC supply
- Supplied with components, PCB and 25-pin 'D' type connector
- Case optional (use H 2851)
- PCB size: 68mm x 145mm

K 2805 **$42.50**

Fibre Optic Audio Link



- Great for applications where interference-free data is required
- Has provision for both microphone and an auxiliary input
- Suitable for high level signals such as VCR, tuner and tape recorder outputs
- Power source required: 9 volt battery
- Supplied with components, PCB, Mic insert, 4 metres of fibre optic cable and a pair of transmitter and receiver devices
- Case optional (use H 2855)
- PCB size: 23mm x 78mm

K 2803 **$49.95**

DISCOVERY SERIES

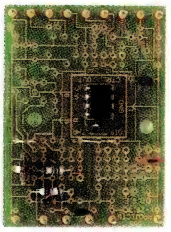
Xenon Flasher

• Once constructed makes a handy bike or hazard lamp • Great as an emergency beacon, strobe for parties or just something to impress your friends • For an even brighter light, an optional torch can be used • Features variable flash rate via trimpot adjustment • Power source required: 9 volt battery • Supplied with components, PCB and mini linear xenon tube • Case optional (use H 2853) • PCB size: 40mm x 82mm

K 2809

$34.95

Multi 555 Timer

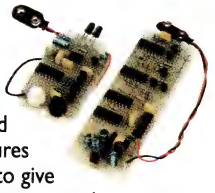


• Circuit uses a 555 timer IC as a building block for timer projects • Allows a timer or pulse generator to be quickly and cheaply put together with just a few parts • Capable of operating relays directly and is easier to set up for those utility projects • Comprehensive instruction manual supplied showing many circuits and overlays for different timing configurations • Power source required: 4.5 volts to 16 volts DC • Supplied with components and PCB • Case optional (use H 2855) • PCB size: 44mm x61mm

K 2813

$16.95

Infra-red Remote Control



• 4-channel infra-red remote control • With hand-held transmitter and matching receiver • Features selectable security code to give immunity against false triggering and prevents operation by other transmitters • Receiver has 5 outputs, which are all capable of directly driving relays • Data outputs can be made to operate in either momentary or toggle (push/on-push/off) mode • Transmitter range: 15m typical • Power source required: Rx – 8volts to 12volts DC, Tx – 9 volt battery • Supplied with components and PCB • Case optional (use Rx – H 2853 Tx – H 2855) • PCB size: Rx – 43mm x 105mm, Tx – 44mm x 71mm

K 2810

$39.95

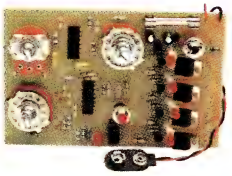
Regulated Power Supply

• Regulated output • 1.2 volts to 37.5 volts • Current 1.5 amps • With built-in current and overload protection • Can be configured as a fixed or variable voltage regulator, voltage regulator with programmable current limiting, combined voltage/current limiting (for lead/acid battery charging) or constant current source (for NiCad battery charging) • Power source required: 4 to 28 volts AC • Supplied with components and PCB • Case optional (use H 2743) • PCB size: 5cm x 5cm

K 2808

$18.50

Light Sequencer



• Can be used as a simple light sequencer or light chaser for decorations, party lights or advertising signs • Four lamp outputs are provided • Drives either filament lamps or LEDs up to 2 amps • Total channel output of 24watts • Power source required: 8 to 18 volts DC • Supplied with components, PCB and hardware items • Case optional (use H 2851) • PCB size: 83mm x 130mm

K 2812

$36.50

Stereo Pre-Amp

• Upgrade your bare power amplifiers into a complete audio system with this quality pre-amp • Features volume, bass, treble and balance controls • Circuit provides an extra input to both channels that can be used for either multi-channel mixing or gain control applications • Frequency response: 4Hz to 80KHz • Input impedance: 40K ohms • Output impedance: 100 ohm • Voltage gain: 3.5V/V (11dB) • Power source required: 9 volts to 36 volts • Supplied with components, PCB and pots • Case optional (use H 2852) • PCB size: 56mm x 122mm

K 2811

$34.50

Clifford – The Cricket

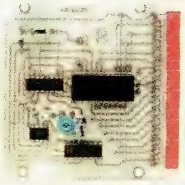
• Experience the feel of the great outdoors without leaving your living room • Turn off your lights and you'll see the cricket's eyes (LEDs) glow and hear it omit a sound resembling the 'chirp' of a cricket • chirping when lights turn on • Power source required: 9 volt battery • Supplied with all components, PCB and piezo alarm • Case optional (use H 2855) • PCB size: 36mm x 41mm

K 3533

SILICON CHIP Dec '94

$12.95

Knightrider Scanner



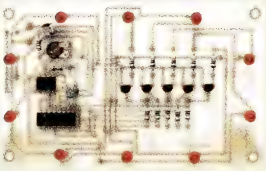
• Experience the feel of the great outdoors without leaving your living room • Turn off your lights and you'll see the cricket's eyes (LEDs) glow and hear it omit a sound resembling the 'chirp' of a cricket • Stops chirping when lights turn on • Power source required: 9 volt battery • Supplied with all components, PCB and piezo alarm • Case optional (use H 2855) • PCB size: 36mm x 41mm

K 3168

SILICON CHIP Feb '94

$20.95

LED Chaser



• Ideal for store front displays or any other place you want to draw attention • Has 10 LEDs flash in rotation around the outer edge of the board • Adjustable speed • Power source required: 6 volts DC • Supplied with all components, PCB and LEDs • Case optional (use H 2851) • PCB size: 83mm x 134mm

K 3166

SILICON CHIP Feb '94

$18.95

Lego Mindstorms

Design and program real robots to do whatever you want them to do! These fantastic kits use lego-style building blocks so you can create almost any kind of robot you wish. They come with a programmable microcomputer that uses sensors to process data and take input from its environment. You're never too old to play with Lego. Comes with CD-ROM, 727 lego pieces, microcontroller, instructions and more!

K 1480

Mindstorms Extreme Creatures	K 1482	$129
Mindstorms Robosports	K 1481	$129

$428

PC not included.

Attention Electronic Hobbyists!

When designing digital circuits, have you ever wondered if there is a better way? Well now there is! CPLDs (Complex Programmable Logic Devices) can be programmed and re-programmed, to be used instead of a larger number of logic devices. They work to miniaturise your kits and with the right programming, can replace hundreds of discrete logic gates in a single chip. Each kit comes with CPLDs, interface boards and programming software. Thanks to Dick Smith Electronics, CPLD starter kits are available for hobbyists to test out. Purchase one today and try it for yourself. See the Trigger Adaptor Kit for an application of a CPLD.

Cybug

Make a self-propelled robot that copies the behaviour of simple insects like a cockroach. Designed from simple analogue circuitry, Cybug can sense and move away from physical obstacles like walls and furniture, can be light seeking (phototropic) or light avoiding (photophobic). Easy mechanical construction and reliable operation, this bug can be made by anyone with an interest in electronics. Consists of high quality PCB, components & instructions.

K 3560

$59.95

Trigger Adaptor MKII

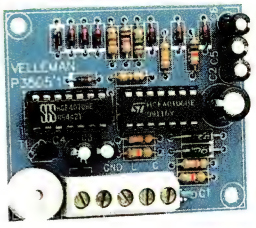
Utilises a complex programmable logic device (CPLD not included). The adaptor, when connected to a CRO, will trigger the scope when all relevant input conditions are met. With eight inputs (expandable up to 24 with slave units) and frequencies up to 20MHz. Trigger pulse delay from 1us to 1ms after preselected event. 1/3 the size of the original kit, with all logic programmed into the CPLD chip. Source code included on floppy disc.

K 1460

$59.95

Velleman Kits

Head Light Indicator

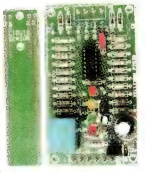


This head-light indicator can be set either to indicate the head-lights should be switched off after switching off the ignition, or to indicate that the head-lights should be switched on once the engine is on. Only three wires needed to hook up. Supply voltage: 12V DC.

K 1304

$24.95

Liquid Level Controller

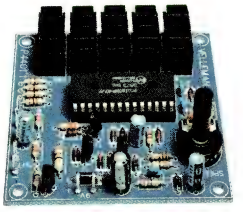


LED indication of set fluid level: low, middle, high. Controller: the relay automatically switches a pump and/or valve to keep the fluid level between the low and high marks. Alarm: if the sensor detects a level which is too high or low, the relay will operate a bell or the alarm device (not included). Supply voltage: 12-14V AC or 16-18V DC, 100mA, relay output 240V, 3A max.

K 1307

$29.95

Sound Generator

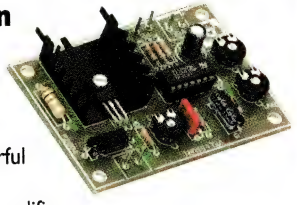


With one output for direct connection to a speaker and one output for connecting to a mixer panel or amplifier. Generate the following effects: machine gun, siren, phaser gun, racing car, screaming of car tyres on a band and an explosion. Supply voltage: 8-10V DC/100mA, line output: 1V RMS, speaker output: 1W.

K 1301

$44.95

Kojak Siren



Create or imitate sirens of all kinds by adjusting three trimmers. Powerful sound with an additional 2W amplifier on the PCB. Supply voltage: 8-14V DC.

K 1300

$18.95

HIGH-Q velleman-kit

Exclusive to Dick Smith Electronics, these Velleman kits are produced and assembled in Belgium, and all come with a reusable plastic container, pre-screened & pre-drilled PCBs and all components stripped in order of assembly.

Electronic Watchdog

A circuit that produces a natural sounding bark with a sensitive 'ear' to everything that comes near it. Choice of two different 'dogs'. Power supply: 2 x 8V AC or 9-12V DC/500mA. Speaker output: 2W @ 4 ohms.

K 1306

$49.80

Screen Wiper Robot

Up to three different time intervals (2-10-15 seconds) can be selected for the windscreen wipers of your car. Manual includes installation instructions for most cars. Relays on PCB. Requires 12-15V DC.

K 1305

$26.95

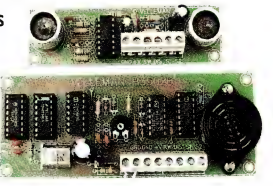
Dual Stereo VU Meter Model

If all inputs of a mixer panel are to be viewed or pre-adjusted then this option is indispensable. The model contains 2 stereo VU meters with 2 x 5 LED indicators and can be used with a 6 or 12 channel mixing panel. (May also be used with other equipment, eg to indicate the output level of an amplifier). Indication: 13, -8, -3, 0, +3 dB. Sensitivity: 0 dB - 0.775 VRMS (easily adjustable). Supply voltage: 14-18V DC/62mA. PCB dimensions: 28 x 98mm.

K 1302

$32.95

Parking Radar



If you have problems parking then this kit with ultrasonic sound waves is for you. It 'measures' a distance between the car and other obstacles and a signal is generated when it crosses the pre-set distance. Supply voltage: 10-15V DC/16mA.

K 1303

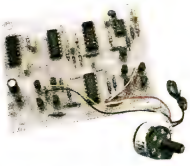
$64.95

Universal Regulator Kit

- A low cost, regulated DC power circuit suitable for powering external peripherals, POC, CD player from a car lighter socket etc
- Uses jumper links to preset output voltage between 3-15V and offers output current up to 1.5 amps (using optional heatsink)
- Power source required: up to 25V DC
- Supplied with components and PCB
- Case optional (use H 2855)
- PCB size: 19mm x 52mm

K 3594 Aug '97 **$6.90**

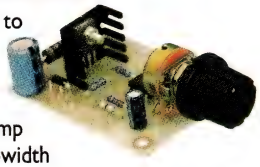
Stepper Motor Controller



- Suitable for small stepper motors
- With forward and reverse direction
- Can be used in a variety of applications such as controlling a model railroad boom gate
- Designed to suit motors which just draw a few hundred milliamps at 12V
- Power source required: 12-16V DC
- Optional case (use H 2851)
- PCB size: 76mm x 97mm

K 3074 SILICON CHIP Jun '97 **$19.95**

DC Motor Controller



- Circuit is designed to control 12V DC mini drill motors or lights with currents up to 1 amp
- Employs the pulse-width modulation (PWM) technique to send bursts of current to the motor, providing an efficient means of varying motor speed
- Power source required: 12V DC
- Supplied with components, PCB and heatsink for switching transistor
- Optional case (use H 2853)
- PCB size: 43mm x 61mm

K 3070 SILICON CHIP Jan '94 **$13.50**

Mini 1.5V - 9V DC Converter

- Here's an easy way to replace those expensive 9V batteries with cost efficient 1.5V cells
- Easy-to-build, uses just 3 components
- Allows any type of 1.5V cell (AA,C,D,N or AAA) to replace a more expensive 9V battery
- Power source required: 1.5V battery
- Supplied with components and PCB
- Case optional (use H 2855)
- PCB size: 17mm x 43mm

K 3231 SILICON CHIP Aug '92 **$12.50**

Universal Power Supply

- Can be used in a variety of ways as either a dual or single supply
- Designed so that constructors can obtain many different voltages: +15V, -15V, +/-15V, +18V to 22V or less than 15V
- Power source required: power adaptor or transformer (depending on individual requirements)
- Supplied with PCB and instructions
- Case optional (use H 3435)
- PCB size: 53mm x 71mm

K 3435 SILICON CHIP Aug '88 **$5.90**

10A Speed Controller

- Use with routers, jigsaws, grinders, circular saws, electric whipper snipper fans etc
- Control available from fully stopped to maximum speed
- Uses modern, switch mode power supply techniques
- Rating of up to 10A @ 240V
- Excellent, very low operating speed
- Constructed in safe, earthed diecast case
- Interference suppression included
- Power source required: 240V AC
- Supplied with all components, PCB, pre-punched diecast case and screened front panel

K 3087 SILICON CHIP Nov '97 **$119**

Also available

Motor Speed Controller

- Rated at 5A
- Suitable for brush type motors
- Triac controlled

$54.95

K 3085 SILICON CHIP Sep '92

LED Battery Voltage Indicator

- Can be used in most battery-operated equipment
- With dual-coloured LED indication
- Combines the functions of a power-on LED and battery voltage indicator
- Voltage range: 6-30V
- Power source required: 9-12V DC
- Supplied with components and PCB
- Optional case (use H 2855)
- PCB size: 25mm x 25mm

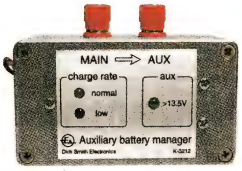
K 3118 Sep '95 **$9.50**

Regulator for Battery Charger

- Turns a 'bare bones' 12 volt automotive battery charger into a fully regulated charger
- Circuit can be left connected to a battery indefinitely
- Designed to adapt an Arlec 4 charger on a similar unit
- Power source required: 12V DC
- Supplied with components, PCB and heatsink bracket
- Case optional (use charger case)
- PCB size: 65mm x 130mm

K 3127 Jul '97 **$25.90**

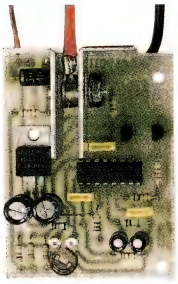
Smart Dual 12V Battery Controller



- Automatically switches your auxiliary battery onto the main electrical system for charging once the engine is started
- Disengages your main battery when the engine is stopped, avoiding excess drain when secondary items are being operated
- Automatically switches between primary and auxiliary battery
- Considerably less expensive than commercially available products
- Supplied with components, PCB, hardware, sealed diecast box and front panel label

K 3212 Jan '96 **$44.95**

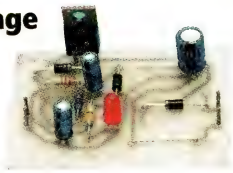
12/24V Speed Controller



- Provides high current speed control for 12 & 24V DC systems
- Maximum current 20 amps
- Pulse-width modulated
- Ideal for controlling 12V DC motors in cars (eg pumps for fuel injection, water/air intercoolers and water injection systems)
- Can also be used for headlight dimming in the daytime and for running 12 volt motors and pumps in 24 volt vehicles
- Power source required: 12-24V DC
- Supplied with components and PCB
- Case optional (use H 2853)
- PCB size: 50mm x 68mm

K 3072 SILICON CHIP Jun '97 **$21.95**

Universal Voltage Regulator



- Power almost any battery-operated device from a car battery or DC power adaptor up to 1.5A
- By changing the resistor value on the PCB you can step-down voltage to 3V, 4.5V, 6V, 9V or other voltages within the range
- Has an output voltage range of 1.2-37V DC
- Features internal thermal overload and short circuit protection
- Supplied with components and PCB
- Case optional (use H 2304)

K 3592 SILICON CHIP May '92 **$8.20**

Low-Voltage Cut-Out

- Ideal for a car or boat when powering external accessories
- Disconnects the load from the battery once the voltage drops to a predetermined level
- Adjustable drop-out voltage: 10.9 to 11.9 volts (nominal)
- Can be set to automatically restore power to the load when the battery returns to normal condition
- Power source required: 12V DC
- Supplied with components, hardware, PCB, case and front panel label

K 3124 Jan '92 **$27.50**

Variable Power Supply

- Uses a power adaptor so no mains wiring is required
- Variable output: 1.5 – 15 volts
- Maximum current: 500mA
- Overload protected
- Power source required: 240V AC
- Supplied with components, hardware, case, pre-punched, pre-screened front panel and 16V AC power adaptor

K 3200 Jul '89 **$59.95**

'4-in-1' Mini Bench Supply

- Easy-to-build DC power supply with exact voltages
- 4 main DC supply voltages: +5V, -5V, +12V and -12V
- Thermal shut-down in case of short circuit or overload with an output status LED on each output
- Supplied with all components, hardware and transformer. Requires 240V AC

K 3213 Jan '98 **$49.95**

Line Carrier Remote Mains Switching Control

- An automation system that lets you switch appliances on and off around the home from a single source
- Expanded capabilities for switching on and off up to 16 receivers from 1 transmitter (additional receivers required)
- Up to 8 different commands can be sent to each receiver
- Supplied with components, PCB, zippy boxes, hardware, IC sockets, front panel labels and mains components for one transmitter and one receiver. Requires 240V AC

K 3607 Dec '97 **$49.95**

Benchtop Power Supply

- Practical and versatile design
- Variable output: 2.5-18 volts
- Output current: 1 amp @ 18 volts (550mA continuous)
- Features switchable current limiting (03mA & 1.2A)
- With switchable voltage and current metering
- Power source required: 240V AC
- Supplied with components, hardware, PCB, panel meter, case and pre-punches, pre-screened front panel

K 3202 Aug '91 **$89.95**

Lab Power Supply

- Dual rail benchtop supply
- Variable output: 0-40 volts (20V-0-20V)
- Output current: up to 3.5 amps,current drops below 3A above 20V
- Current limit: approx. 30mA to 3.5A adjustable (in 2 ranges)
- Features both voltage and current meters
- Electrical and thermal overload protection
- With output load switching, current setting switch and drop out indicator
- Power source required: 240V AC
- Supplied with components, hardware, PCB, panel meters, case and pre-punched, pre-screened front panel

K 3206 Jan '94 **$179**

Bring your model train set to life!

Model Rail Point Controller

- Operate your model railway points remotely
- Requires 12-15V AC/DC

K 3031 SILICON CHIP Jun '97 **$7.95**

Train Controller Kit

- One control provides full reverse to full forward speed
- Circuit provides inertia and a brake switch plus automatic overload protection
- Power source required: 240V AC (mains transformer required M 2165(9V-0-9V))

K 3029 SILICON CHIP Apr '97 **$29.95**

Model Train Control

- Regulates the speed of your model train and simulates inertia and momentum
- Power source required: 6-18V AC
- Supplied with components, PCB, hardware, front panel label and case

K 3027 Nov '95 **$19.95**

Kit Light Simulator

SC 5/97 For Traffic Lights

- Simple projects for a model railway that simulates traffic lights
- Supplied with components, LEDs and PCB. Needs 15V DC

K 3023 SILICON CHIP May '97 **$9.95**

Diesel Sound Simulator

- Easy-to-build and fits inside most locomotives (speakers included)
- Supplied with components, PCB and mini speaker
- Case optional

K 3030 SILICON CHIP Dec '92 **$14.95**

Steam Whistle Kit

- Creates two-chord whistle sounds
- Power source required: 12V DC
- Supplied with components, PCB and mini speaker
- Case optional (use H 2853)

K 3021 Jun '96 **$16.95**

Steam Train Whistle

- Produces all the noises of the traditional steam-generated whistle blown by steam trains
- Power source required: 12V DC
- Supplied with components, PCB and mini speaker
- Case optional (use H 2851)

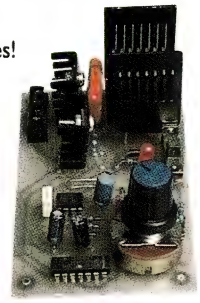
K 3024 SILICON CHIP Jun '94 **$19.50**

Electronic Fluoro Starter

- For rapid turn on and blink-free running of your fluoro lamps
- Suit 18, 36 and older style 20 and 40 watt tubes
- Power source required: 240V AC
- Supplied with all specified components, PCB and starter case

K 3012 Silicon Chip Sep '96 **$18.50**

12V Flasher Unit



- Great for signs or parties! Uses 1 x 555 timer and 1 Mosfet
- Strobe (1 lamp) or flasher (2 lamp) operation
- Drives 20 or 50W Halogen lights
- Power source required: 12V AC or DC
- Supplied with all components, PCB and semiconductors. Lamps optional

K 3169 Silicon Chip Jan '98 **$18.95**

Mini Strobe Kit

- Can be used as an rpm indicator for electrical motors etc
- Range adjustable from 400 to 4000 rpm
- Power source required: 9V battery
- Supplied with components, hardware, PCB, case and front panel label

K 3160 Sep '97 **$23.50**

Midi Breakout Box

- Interfaces the keyboard to your sound card and is a low cost alternative to 'off-the-shelf' interfaces
- Power source required: 5V DC
- Supplied with components, PCB, hardware, case and pre-punched, screened front panel

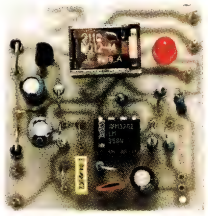
K 3604 Mar '94 **$39.95**

Temp Controller

- Used in control applications such as room temperature control or cooling devices such as fans
- Automatically switches the power on or off when the temperature goes below or above a set threshold
- Supplied with all components, hardware, digital temperature module, case and pre-punched, screened front and rear panels

K 3130 Sep '93 **$115**

Mini Vox



- Build your own tiny voice-activated relay!
- Great where hands-free operation is required
- Power source required: 12V DC
- Supplied with components and PCB
- Case optional (use H 2855)
- PCB size: 43mm x 46mm

K 3038 Silicon Chip Oct '94 **$14.95**

Vader Voice Kit

- Here's one for Dr Who and Star Wars fans! Disguise your voice as either Darth Vader or a Dalek
- Comes with all components, PCB, hardware, case, speakers and front panel label

K 3511 Silicon Chip Oct '95 **$29.95**

Metal Detector

- Highly-sensitive, suitable for use over wet or dry beach sand, with adjustable volume signal
- Operates on 3V DC (2 x 'C' cells)
- Supplied with components, limited hardware, PCB, case. Other hardware items (eg conduit, bends, clamps etc) are optional and can be purchased from your local hardware store

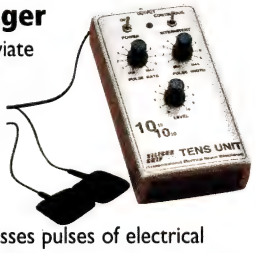
K 3006 Silicon Chip Oct '95 **$74.95**

Phone/Modem Switch

- When connected to a modem, this unit will activate its 240V AC outlet when a pre-determined number of rings occur on the phone line
- Power source required: 240V AC
- Supplied with components, hardware, PCB, case and pre-punched, screened front panel

K 3606 Jun '97 **$39.95**

T.E.N.S Massager



- Now you can alleviate pain electronically with this Transcutaneous Electrical Neural Stimulation (T.E.N.S)
- A device which passes pulses of electrical current through the skin via electrodes to stimulate the nerves below
- Power source required: 6V DC (4 x AA cells)
- Supplied with components, hardware, PCB, case and front panel label; (electrodes are optional and can be obtained from most chemists)

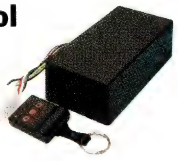
K 3702 Silicon Chip Sep '97 **$79.95**

Stud Finder

- Ideal for handymen, home renovators etc
- Glide stud finder over any fibro or gypsum board wall to locate studs and noggins
- Power source required: 9V battery
- Supplied with components, hardware, PCB case and front panel label

K 2723 Oct '88 **$19.50**

UHF Remote Control



- 2-channel remote control
- Can control two separate devices
- Operating range: approx. 20m (with 30cm antenna)
- Allows for over 6000 security code options
- Power source required: 10-15V DC
- Supplied with components, hardware, PCB, receiver module, case and a 2-channel keyring type transmitter (fully assembled)

K 3260 Silicon Chip Jan '95 **$99.95**

Extra transmitter also available

K 3261 **$39.95**

Disco Light

- Drives four lighting channels (maximum load 2400 watts)
- Can be controlled from your stereo or its own built-in microphone
- Forward, reverse, auto-reversing chaser patterns and adjustable strobe rates
- Simultaneous strobe on all channels and alternate light mode
- Power source required: 240V AC
- Supplied with PCB, all components, case, hardware and pre-punched, screened front panel

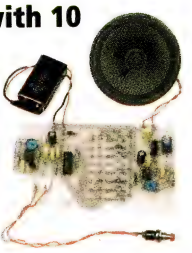
K 3150 SILICON CHIP Jul '88 **$169**

Electric Fence Controller

- Suitable for activating fence runs of around 1km in length
- Power source required: 12V DC
- Supplied with components, case labels, PCB and hardware items such as banana sockets and battery terminal alligator clips
- Other hardware items such as PVC tubing, end caps and 12V ignition coil are optional

K 3008 SILICON CHIP Jul '95 **$29.50**

Doorbell Chime with 10 Selectable Notes



- An easy-to-build doorbell chime where you can program your own tune with 10 selectable notes
- Install in your existing doorbell housing
- Power source required: 12V DC
- Supplied with components, PCB and mounting screws

K 3803 SILICON CHIP Nov '97 **$17.95**

Disco Strobe

- Provides a high-energy flash or white light
- Variable flash rate from 1-10 flashes per second
- More than one unit can be linked to flash in synchronisation
- Power source required: 240V AC
- Supplied with components, hardware, PCB, deluxe plastic case, screened perspex front panel, linear 100mm Xenon tube and a commercial high-efficiency reflector

K 3155 EA Dec '92 **$149**

Woofer Stopper MKII

Hi-Power!

- Now you can quieten that annoying neighbourhood dog
- Emits a blast of high-intensity sound (inaudible to humans) to deter dogs
- Can drive a maximum of 4 horn tweeters
- Power source required: 12V battery (use S 3317) or 12V DC power adaptor (M 9670)
- Supplied with components, PCB, hardware, plastic case, front panel label and super horn tweeter (C 2205)

K 3033 SILICON CHIP Feb '96 **$79.95**

NiCad Battery Discharger

- Has switchable voltage (3.6, 4.8, 6.0, 7.2, 8.4, 9.6, 10.8 and 12V)
- Automatic cut-off
- Ideal for most types of NiCads used in camcorders, cellular phones and radio-controlled cars
- Current discharge of 50mA or 200mA
- Power source required: nil
- Supplied with components, hardware, case and pre-punched, screened front panel

K 3126 SILICON CHIP Nov '92 **$36.95**

Laser Pointer

- Lightweight, compact and easy to construct
- Output less than 1mW
- Adjustable focus
- Power source required: 3V DC (use 2 'AAA' cells)
- Supplied with laser diode module, hardware, batteries and a professional looking laser pointer case

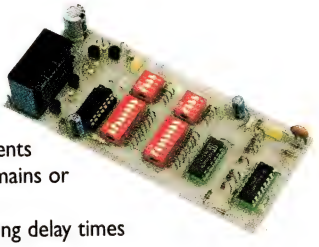
K 1048 SILICON CHIP Jan '96 **$39.95**

Tinnitus Relief Kit

- A device that delivers a low-level background hiss (white noise), used to help mask the noises heard by people suffering from tinnitus
- Masking signals can be varied from a 'gushing waterfall' to a 'soft wind'
- MTP3055 MOSFET switches the unit on or off when earphones are plugged in or removed
- Far less expensive than ready-built, commercially available units
- Small enough to slip into a pocket
- Power source required: 1 x 9V battery
- Supplied with components, hardware, PCB, deluxe case and pre-punched front panel with label
- Headphone included

K 3703 EA Dec '97 **$24.95**

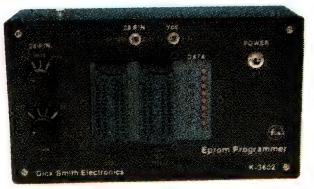
Flexi Timer MKII



- Selects timing periods from seconds to days
- With four separate outputs and two independent programmable timing events
- Can be synchronised with the 50Hz mains or driven by an internal RC clock
- Dip switches provided for programming delay times
- Power source required: 5 – 15V DC
- Supplied with components and PCB for assembly of basic version to suit DC source
- Case optional (use H 2851)
- PCB size: 55mm x 125mm

K 3596 EA Aug '95 **$29.95**

EPROM Programmer



- Flexible and powerful programmer
- Controlled via the parallel port on an IBM compatible PC
- Can handle EPROMs from 2716 (2K x 8) to 27256 (32K x 8) and it will also program 2816 and 2864 electrically-erasable (EE) PROMS
- Power source required: 12V AC
- Supplied with components, hardware including two quality EPROM test sockets, case and pre-punched, screened front panel & display PCB

K 3602 EA Sep '93 **$119**

Combination Lock

- Can be used to operate your K 8401 alarm control unit or many other burglar alarms
- Also works with solenoid door locks
- Can be set to trigger the alarm if it detects repeatedly incorrect entries
- Power source required: 12V DC
- Supplied with components, PCB and high-quality keypad
- Case optional (use H 2853 plus K 8404 front panel pack)
- PCB size: 51mm x 115mm

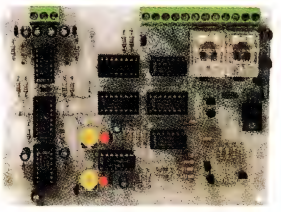
K 8403 Sept '90 **$39.95**

Also available K 8404 Front Panel **$7.95**

2-Sector Alarm Control Unit

- Designed to be easily customised with additions such as sector modules (K 8400), power supply(K 8402) and keypad lock (K 8403)
- Features variable entry/exit delays, LED status indicators, alarm driver circuitry, timed and latched outputs and 2-sector inputs
- Power source required: 12V DC
- Supplied with components, PCB, hardware items such as IC sockets, relays and terminals
- Case optional (use H 2744)
- PCB size: 116mm x 140mm

K 8401 Jun '90 **$29.95**



Pocket Sampler

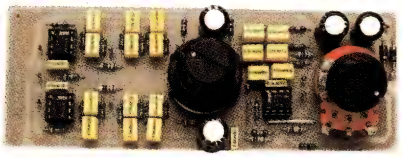
- Provides an interface between your computer and the outside world
- Connects your computer via the parallel port
- 8-bit resolution
- Sampling time scale, ranging from once every hour to one sample every 100us (10kHz)
- Power source required: 8-16V DC
- Supplied with components, case, hardware, front panel label and software on a 3.5" disk

K 7345 Aug '96 **$29.95**

Active Crossover

- Allows you to integrate a subwoofer with an existing speaker system
- Offer both low-pass and high-pass outputs that have matching roll-off and phase characteristics
- Input and output impedances: 47k and 100 ohms respectively
- Power source required: 12V AC (use M 2851 transformer)
- Supplied with components, PCB, hardware such as pots, knobs and sockets
- Case optional (use H 2508)
- PCB size: 50mm x 140mm

K 5404 Sept '94 **$36.50**



Microwave Leakage Detector

- Simple and easy to use
- Check for harmful microwave leakage simply by pressing a button
- No batteries or power source required
- Supplied with components, hardware including signal meter, case and front panel label

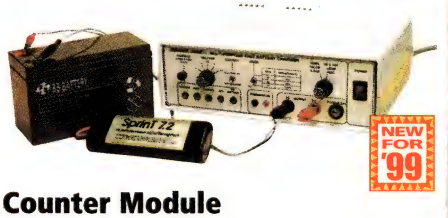
K 3095 ETI Jul '79 **$14.50**

Universal Charger

Immensely popular!

- Designed to fast charge many types of batteries as found in power tools and phones including NiCad and NiMH
- Also charges 6V and 12V sealed lead acid (SLA) packs and lead acid car and motorcycle batteries
- Power source required: 240V AC
- Supplied with all components, hardware, transformer, heatsink, PCB, plastic case, pre-punched, screened front panel and pre-punched rear panel

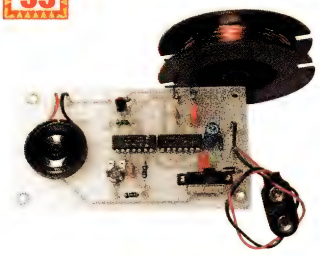
K 3216 Feb '98 **$179**



Elementary Metal Detector

- Shows the basic principles of how to detect metallic objects
- Includes a transistor to boost signal levels
- Specially designed coil, with extra width for high metallic sensitivity

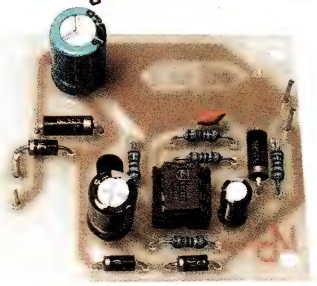
K 3007 NEW FOR '99 May '98 **$16.95**



Solar Generator

- Cheap, no fuss way to trickle charge a 12V lead acid or gell cell battery using a solar panel
- Ideal for any area where mains power is unavailable
- Supplied in short form with PCB and components

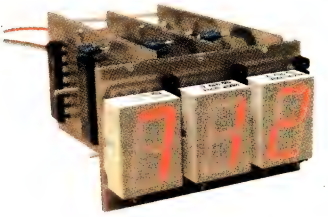
K 3129 ETI Dec '87 **$12.95**



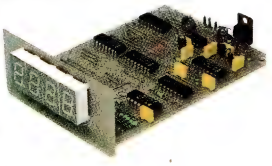
Counter Module

- 3-digit display
- Expandable to as many digits as you like
- Control inputs include lamp test, blanking, output latching, up/down count, input gating, reset and clock
- Supplied with components, PCB and displays

K 3452 Jan '98 **$29.95**



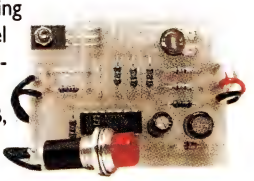
Digital Tachometer



- 4-6 digit display works with ignition systems on 4, 6 & 8 cylinder motors
- Supplied with components, PCBs and LED display
- Power source required: 12V battery
- PCB size: 82mm x 108mm

K 3241 SILICON CHIP Aug '91 **$32.50**

Low Fuel Indicator



- Lights a 12V warning lamp when the fuel drops below a pre-determined level
- Supplied with PCB, zippy box, 12V bezel and all necessary components
- Requires a 12V battery

K 4210 SILICON CHIP Feb '93 **$14.95**

Digital Voltmeter

- Measures battery voltage between 8-17 volts with a 3-digit LED display
- Supplied with components, hardware, PCB, case, front panel label and digital displays. A satellite PCB is supplied to mount the displays remotely
- Requires a 12V battery

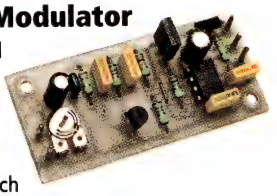
K 4208 SILICON CHIP Jun '93 **$44.95**

Audible Car Monitoring System

- When trouble occurs, an audible alarm will alert you
- Can be connected to warning indicators such as oil, temperature, brake, engine management (EMU), alternator etc
- Includes all components, PCB, case, piezo beeper and hookup wire

K 4216 EA Mar '97 **$22.50**

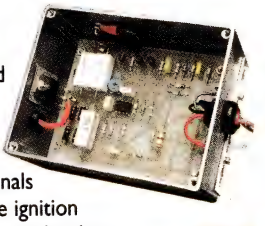
Neon Tube Modulator



- Wire the sound system of your car to the neon light system
- Modulates 12V neon tubes which connect to the subwoofer so they oscillate with the bass beat
- Supplied with components and PCB
- Requires a 12V battery
- PCB size 28mm x 60mm

K 3164 SILICON CHIP May '97 **$7.95**

High Energy Ignition Kit

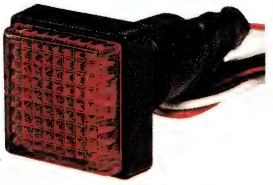


- Reduces the need for tune-ups in cars with points
- Provides connection terminals for programmable ignition
- Includes components, hardware, PCB and diecast box
- Power source: 12V DC

NEW FOR '99

K 3303 SILICON CHIP Jun '98 **$49.95**

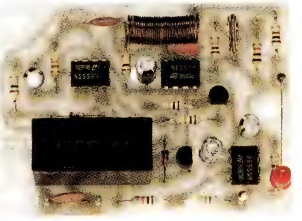
Flashlight Deterrent Light



- Red flashing light
- Activated by the ignition and automatically turns off with ignition
- Supplied with components, mounting hardware, deluxe bezel case and 12V globe.
- Power source required: 12V battery

K 4200 SILICON CHIP Nov '91 **$10.95**

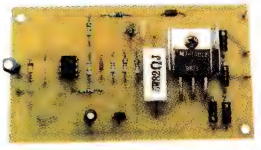
Budget Car Alarm



- Simple to construct and install, features a warning LED
- Supplied with components and PCB
- Requires 12V battery
- PCB size: 55mm x 74mm

K 3250
ETI project book **$19.95**

Engine Immobiliser MKII



- Circuit stalls engine when activated
- Connects directly to ignition system
- Kit can be assembled and used independently
- Can also be interfaced with control module (keypad)
- Power supply: 12V DC
- Includes all components, case and PCB

NEW FOR '99

K 4303 SILICON CHIP Dec '98 **$29.95**

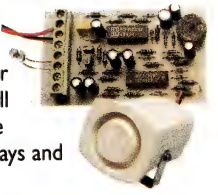
Immobiliser MKII Keypad

NEW FOR '99

- Interfaces with the new immobiliser kit
- Choose your own 4-digit code for arming/disarming
- No hidden switches required or keys to carry
- Can be hidden or mounted for visible deterrence
- Power supply: 12V DC
- Supplied with hardware, keypad module, PCB and all components

K 4304 SILICON CHIP Jan '99 **$24.95**

Screecher Car Alarm MKII



- Utilises a high-output, piezo siren to blast an intruder inside your car
- Compact, easy-to-install and extremely effective
- Features entry/exit delays and flashing warning LED
- Circuit includes transition sensitive triggers
- Power supply: 12V DC
- Includes all components, piezo siren, case and PCB

NEW FOR '99

K 4301 EA Jan '99 **$29.95**

LED Voltmeter

- 3 LEDs show if battery voltage is low, correct or high
- Supplied with a small PCB, status LEDs and components
- Requires 12V battery
- PCB size: 25mm x 39mm

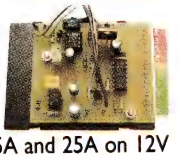
K 4205 EA Mar '92 **$7.90**

Car Battery Monitor

- Simple and functional kit to monitor your car battery
- The state of charge is shown by an LED bar graph
- Levels range from under-charged to optimum charge levels to over-charged
- Supplied in short form with PCB and components

K 4611 EA May '87 **$12.95**

12V Car Ammeter



- Circuit measures voltage drop across negative strap
- 10 LEDs to indicate level or charge or discharge
- Displays levels between -25A and 25A on 12V
- Use to monitor the state-of-charge of the battery to control accessory loads etc
- Includes all components, case and PCB

NEW FOR '99

K 4612 SILICON CHIP Jan '99 **$16.95**

Signal Tester

- Great project for the beginner
- Ideal for tracing audio signals, amplitude modulated (AM or radio frequency (RF) signals in circuits)
- Simple and useful piece of test equipment when attempting to repair amplifiers or radios
- With switchable gain
- Power source required: 9V battery
- Supplied with components, hardware, PCB, case and front panel

K 7332 SILICON CHIP Jun '97 **$16.95**

Shielded Resistance Box

- Covers 3 decades, from 1kOhm to 777kOhm
- Shielded to prevent hum and RF interference
- Utilises BNC sockets at each end
- Can be built in hours, no PCB required
- Includes all components and front panel label

K 7125 EA Dec '98 **$9.95**

Logic Probe

- Ideal for tracking faults in digital systems
- Indicates logic 'high' and 'low' levels on both TTL and CMOS
- Used on circuits with supply voltages between 5 and 15V
- With 'stretching' or 'latching' for detecting short pulses
- Supplied with all components, case, front panel label and lead with clips

K 7405 EA Aug '90 **$24.95**

Sine/Square Wave Oscillator

- High-performance benchtop audio oscillator
- Covers frequency range from around 6Hz to 70kHz in 4 ranges
- Distortion: 0.1% (20Hz to 50kHz)
- Output: 2V RMS sine
- Supplied with components, hardware, PCB, case and pre-punched, screened front panel

K 7340 EA Mar '92 **$64.95**

ESR & Low Ohm Meter

- Measures the equivalent series resistance (ESR) in a capacitor which is often difficult to check with capacitance meters
- Also great for measuring very low values of resistance
- Supplied with all components, hardware, PCB, case, display window and pre-punched, screened front panel
- Power source required: 9V battery

K 7204 EA Jan '96 **$64.95**

Shorted Turns Tester

- Tester for line output or 'flyback' transformers and HF wound components
- Aids in the servicing of TV receivers, video monitors and computer power supplies
- Identifies horizontal output stage faults
- Includes all components, PCB, case, pre-punched and screened front panel

K 7205 EA Aug '98 **$44.95**

Exclusive to Dick Smith Electronics

Capacitance Meter Adaptor

- Turns your digital or analogue multimeter into a direct-reading capacitance meter
- Plugs directly into your meter
- Capacitance range from 3.3pF to 2000uF in 2 ranges
- Power source required: 9V battery
- Supplied with components, PCB and hardware such as banana plugs, switch and battery snap
- Case optional (use H 2853)
- PCB size: 25mm x 66mm

K 3410 EA Aug '88 **$19.95**

Mini Oscillator Kit

- Small enough to fit in your pocket
- Produces low distortion sine or square waves
- Covers frequency range from around 41Hz to 18kHz
- Output: 1.27V RMS sine (+4dBm)
- Distortion: 0.16% THD @ 1kHz
- Power source required: 9V battery
- Supplied with components, PCB, hardware, case and pre-punched, screened front panel

K 7339 EA Dec '96 **$27.50**

Thermocouple Adaptor

- Can be used with any digital multimeter
- Temperature range governed by characteristics of probe
- Range of probe supplied: -4°C to 250°C
- Connects to your digital multimeter via flying leads and banana sockets
- Operates on a 1 x 'AA', 1.5V DC and 1 x 9V DC battery
- Comes with case, front panel label, battery clips, PCB and all components

K 7120 SILICON CHIP Dec '98 **$34.95**

Soundcard Pre-Amp

- Converts your soundcard into an oscilloscope or waveform generator
- Take full advantage of your soundcard's input capabilities for making measurements
- Includes software to get you started
- With all components, hardware, PCB, case, pre-punched and screened front panel

K 7347 EA Aug '98 **$34.95**

Crystal Tester

- An easy, quick way to check crystals before installing them in projects
- Gives you a simple 'good' or 'bad' indication via an LED
- Power source required: 9V battery
- Supplied with components, PCB and hardware items such as battery snap and alligator clips
- Case optional (use H 2855)
- PCB size: 39mm x 51mm

K 7228 SILICON CHIP Aug '94 **$4.50**

In-circuit Transistor Tester

- Handy for indicating whether or not transistors are working properly
- Check for NPN and PNP types
- Power source required: 9V battery
- Tests both small signal and power transistors
- Indication given by 2 LEDs
- Can be used to test transistors that are already in circuit
- Supplied with all components, PCB, hardware (including test clips), case and pre-punched, screened front panel

K 7218 SILICON CHIP Sep '93 **$22.50**

Champ Pre-Amp

- Designed to work with most small amplifier modules including our mini amplifier (K 5604).
- Simple to construct using two common transistors (BC548/BC558)
- Up to 40dB gain • Provision available on PCB for an (optional) electret mic insert • Power source required: 9V battery • Supplied with components and PCB • Case optional (use H 2855)
- PCB size: 36mm x 46mm

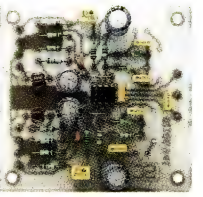
K 5608 SILICON CHIP Jul '94 **$7.95**

A Big Noise From A Tiny Amp! 0.5W Amp Module

- This tiny amp is about the size of a 9V battery • Produces 0.5W into 8ohms. • Perfect for any of those projects that need an efficient, inexpensive amp that takes up minimal space • Power source required: 9V battery • Case optional (use H 2855) • PCB size: 25mm x 46mm

K 5604 SILICON CHIP Feb '94 **$6.80**

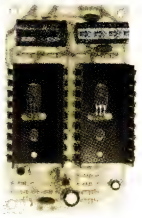
Universal Pre-Amp



- This low noise stereo pre-amplifier is easy to build and ideal for use with magnetic cartridges, cassette decks or microphone inputs • Uses a single dual op-amp IC (LM-833) • Power source required: 15-0-15V DC • Supplied with components and PCB • Case optional (use H 2851) • PCB size: 78mm x 80mm

K 5402 SILICON CHIP Apr '94 **$14.50**

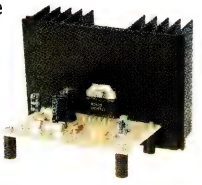
20W Module



- Similar to amps found in TVs, tape recorders, organs, synthesisers, etc.
- Uses discrete transistors for greater reliability.
- Ideal for the novice looking for an understanding of how an audio amp works • Power output: 6.6 watts, 12 watts or 19 watts (into 4 ohms) depending on supply voltage • Input impedance: 100K approx
- Power source required: DC 20V (6.6 watts), 30V (12 watts), 35V (19 watts) • Supplied with PCB and components • Case optional (use H 2851)
- PCB size: 77mm x 127mm

K 3445 SILICON CHIP Nov '94 **$24.50**

50W Amplifier Module



- Single chip power module using the LM3876 power amplifier IC • Extremely low distortion • Output power: 50W continuous into 8ohms • IHF power output: 60W @ 1kHz
- Signal-to-noise ratio: 114dB (A weighted) – 106dB (20-20kHz)
- Distortion: 0.002% @40W 1kHz
- Power source required: +/-37.5V DC
- Supplied with components, PCB and hardware such as fuse and heatsink • Case optional (use H 2481) • PCB size: 59mm x 84mm

K 5606 SILICON CHIP Mar '94 **$29.95**

50W Stereo Amp Module

- Uses two LM3886 monolithic power ICs for stereo output • Power output: 50 watts per channel into 8 ohm loads • With reduced supply rail: 60W/Ch into 4 ohm loads
- Input sensitivity: 870mV RMS • Power source required: 25V-0-25V AC (use M 1605 transformer) • Supplied with components, PCB and heatsinks • Case optional (use H 2481)
- PCB size: 60mm x 248mm

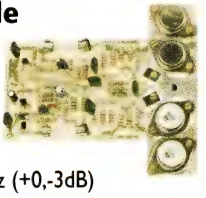
K 5612 SILICON CHIP Feb '95 **$49.95**

50W Amp Module

- Perfect for band use as a PA, or build a pair for your own stereo
- Power output: 50W into 8 ohms
- Frequency response: 5Hz to 50kHz (+0, -3dB)
- Noise: 100dB
- Sensitivity: 0.5V
- Power source required: +/- 40V DC (use K 3438)
- Supplied with components, PCB, fuses and transistor mounting bracket
- Case optional (use H 2481)
- PCB size: 77mm x 140mm

K 3440 SILICON CHIP ETI Jun '95 **$28.50**

100W Amp module



- You can use two of these for stereo, giving a massive 200W output
- Power output: 100W into 4 ohms
- Response: 5Hz to 50kHz (+0,-3dB)
- Noise: 100dB
- Sensitivity: 1V
- Power source required: +/- 40V (use K3438)
- Supplied with components, PCB, fuses and transistor mounting bracket
- Case optional (use H 2481)
- PCB size: 77mm x 140mm

K 3442 SILICON CHIP ETI Jun '95 **$37.50**

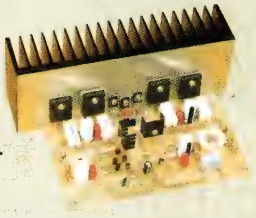
Power Supply Modules

Suits 50W & 100W Amp

- This power supply will run either two 50W modules (K 3440) or one 100W module (K 3442)
- Circuit includes speaker de-thump circuitry
- Output voltage: +/- 40 volts (40-0-40V)
- +/-15 volt supply rail also available which can be used to power a pre-amp
- Power source required: 28-0-28V AC @ 2A (use M 0144 transformer) • Supplied with components, PCB and relay for de-thump circuitry • Case optional (use H 2481)
- PCB size: 76mm x 159mm

K 3438 SILICON CHIP ETI Dec '79 **$29.50**

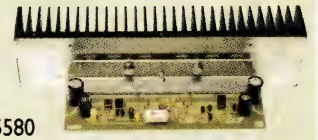
125W Amp Module



- High power output with low noise and distortion. Based on the Motorola MJL21193/94 200W plastic power transistor
- Features single-point star earthing, on-board supply rail fuses, output RLC filter network for unconditional stability and straight forward procedure for setting the quiescent current
- Power output: 125W into 8 ohms and 175W into 4 ohms
- Total harmonic distortion: less than 0.01%
- Supplied with components, on-board hardware, PCB & output devices
- Heatsink optional (use H 3406) • Case optional (use H 2481)
- PCB size: 100mm x 167mm

K 5616 SILICON CHIP Apr '96 **$69**

300W Mosfet Amp Module



- Easy to build, single board construction
- Offers excellent noise and distortion performance
- Module as used in sub-woofer amp K 5580
- Output power: 320W into 4 ohms 200W into 8 ohms • IHF power output: 430W into 4 ohms (short term), 240W into 8 ohms • Harmonic distortion: 0.005% at 300W into 4 ohms • Signal to noise ratio: >95dB at 100W RMS (unweighted) • Frequency response: 10Hz to 100Hz, -3dB
- Input sensitivity: 0.6V @ 47K for 200W RMS into 8 ohms
- Power source required: 50-0-50V AC (use M 1620 transformer)
- Supplied with components including mosfet transistors, PCB and heatsink bracket. Heatsink optional (use H 3408) • Case optional (use H 2481)
- PCB size: 79mm x 202mm

K 5618 EA Apr '95 **$119**

Mini Stereo Amplifier

- This inexpensive circuit can give you the flexibility of a home hi-fi on your desk
- Uses your personal stereo as the 'brains' of the operation
- Utilises a tiny 8-pin DIL device which contains 2 amplifiers
- Output power: 1 watt into 8ohms (@ 9volts)
- Power source required: 1.8-12V DC
- Supplied with components, PCB, hardware, front panel label and case

K 5008 SILICON CHIP Oct '92 **$29.95**

15W Stereo Amplifier

- A versatile and compact amp which can be used in various applications
- Output power: 15W per channel into 4 ohms
- Features bass, treble, balance and volume controls
- 3-way input selector switch (CD, tuner and TV)
- Frequency response: 10Hz to 100kHz – 3dB
- Harmonic distortion: 0.05% @ 14W RMS into 8 ohms
- Power source required: 240V AC
- Supplied with components, hardware, PCB, deluxe case and pre-punched, screened front panel

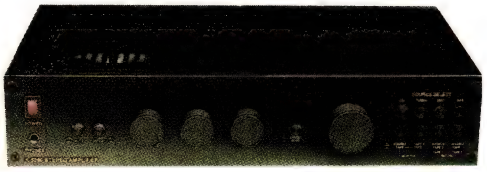
K 5610 Dec '94 **$95**

Mixer Pre-amp

- 4-channel mixer pre-amp
- Has separate bass, treble, mid-range input and out put level control
- Frequency response: 18Hz-35kHz (+/-3dB)
- Power source required: +/- 15 volts DC
- Supplied with PCB, components and hardware
- Case optional (use H 2481)

K 5400 SILICON CHIP Jan '92 **$56.95**

50W Stereo Amplifier



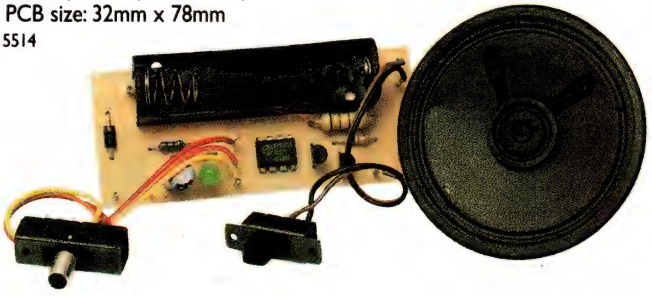
- Compatible as a basic amplifier, it's ideal for your home stereo
- A coupler socket and switch setup is included in the design which provides a direct stereo patch point between the output of the pre-amp and the input of the power amplifier
- Allows other equipment such as power amp or subwoofer amp to be connected in parallel
- Output power: 54W RMS (single channel) 46W RMS (both channels)
- Input sensitivity: 1V
- Frequency response: 20Hz to 30kHz +0/-0.5dB
- Harmonic distortion: < 0.04% (20Hz to 20kHz)
- Power source required: 240V AC
- Supplied with components, hardware, PCB, pre-punched case (powder coated matt black) and a pre-punched, screened front panel

K 5590 Jul '96 **$229**

Siren Generator Kit

- Just a flick of a switch will sound police, ambulance or fire engine sirens
- With just a slight alteration you can also get it to emit the sound of a machine-gun firing
- Power source required: 1.5V battery (AA cell)
- Supplied with components, PCB, battery holder and speaker
- Case optional (use H 2853)
- PCB size: 32mm x 78mm

K 5514

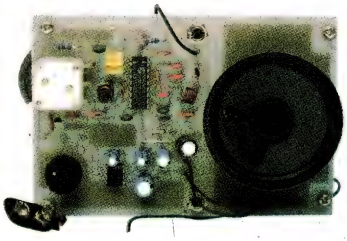


SILICON CHIP Nov '93 **$11.50**

AM Radio Trainer

- Teach yourself the basic principles of how a superheterodyne radio works
- Uses commonly-used parts and everything is mounted on a single PCB
- Power source required: 9V battery
- Supplied with components, PCB and hardware (including battery holder)
- PCB size: 91mm x 277mm

K 5016 SILICON CHIP Jun '93 **$29.95**



FM Radio

- Great hands-on way to learn about Radio Frequency (RF) circuits and Audio Frequency (AF) amplifiers
- Power source required: 9V battery
- Supplied with components, PCB and speaker
- Case optional (use H 2852)
- PCB size: 86mm x 128mm

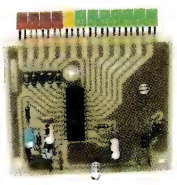
K 5014 SILICON CHIP Nov '92 **$34.90**

Weather Radio

- Once you've tuned in with the weather radio, you'll be up-to-date with the latest weather reports
- Its frequency coverage extends from 200kHz up to 580kHz
- Covers the airport weather beacons available in your local area
- Power source required: 9V battery
- Supplied with components, hardware, PCB, case, front panel label

K 5022 SILICON CHIP Sep '94 **$24.50**

12 LED VU Meter



- Design offers fast response and peak hold display
- Power source required: 11-40V DC
- Supplied with PCB, red, yellow and green LEDs, plus all necessary components
- Case optional (use H 2851)

K 5370

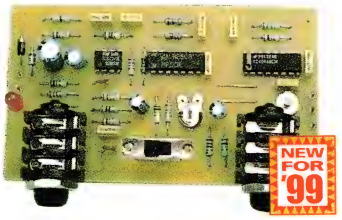
SILICON CHIP Feb '93 **$24.95**

Guitar Practise Amp Module

- Ideal for practising your favourite riffs at home
- Output power: 4 watts into 4 ohms
- Power source required: 12V DC (nominal)
- Supplied with components, PCB, hardware such as pots, knobs, heatsink and front panel label
- Case optional: cabinet design details shown in the instructions
- PCB size: 48mm x 62mm

K 3548

AEM Aug '88 **$29.95**



NEW FOR '99

Wah-Wah Guitar Kit

- Popular guitar effect is controlled by a foot pedal (not included)
- Resulting sound produces suddenly increasing/decreasing volume
- Includes PCB stakes, PCB, components and PCB mounted 6.75mm sockets

K 5620

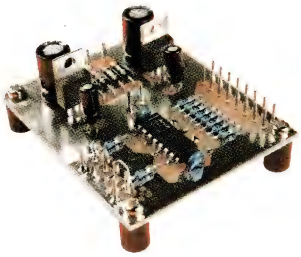
SILICON CHIP Sep '98 **$26.95**

Stereo Simulator

- Converts 'old favourite' movies to stereo sound
- Brilliant low-cost device turns almost any mono signal into synthetic stereo sound
- Simple to construct and use
- Supplied with components, hardware, case, front panel label and 9V DC power adaptor

K 3421

EA Apr '83 **$29.95**



Video and Pulse Distribution Amp

- Distributes composite video, S-video signals or frequency/time reference signals to a number of locations
- No loss of signal or image when connecting up to four monitors from a single source
- Very wide band-width useful for driving multiple computer monitors from a single video graphics adaptor
- Great for labs, schools and colleges
- Supplied with components and PCB

K 5413

EA Dec '97 **$42.95**

Budget Karaoke

- Using principles employed by recording studios
- Replaces the vocals on any of your favourite tapes or CDs with your own
- Includes 'gain' and 'null' controls for sensitivity and signal balance
- Power source required: 2 x 9V batteries
- Supplied with PCB, components, hardware, case and pre-punched, screened front panel

K 5300

EA Nov '91 **$19.95**

VHF-UHF Masthead Amplifier

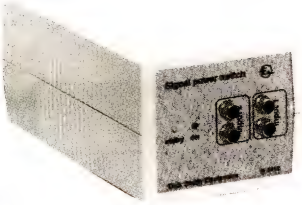
- Use this updated wideband amplifier to boost signal strength
- Provides stable amplification of at least 9dB to 2GHz
- Great for improving TV and other signal reception in the VHF and UHF bands
- Power source required: 9V DC
- Supplied with all components, hardware, PCB, casing, pre-punched front panel and power adaptor

K 5801

$49.95

NEW FOR '99

EA Jun '98



Signal-triggered Mains Switch

- Turns on your entire home entertainment setup/hi-fi system with just one switch!
- Activate any piece of gear that needs to be on when audio signals are present
- With extra safety features
- Comes with all components, PCB, case, pre-punched and screened front panel
- Power supply 240V AC

K 5418

$49.95

EA Oct '98

Video Fader and Wiper

- Good for home videos, allows professional post-production
- Fade out one image and into the next or wipe-out from one image to another, either horizontally or vertically
- Built-in enhancement facility to compensate for picture degradation caused by video dubbing
- Power source required: 12V DC
- Supplied with all components, hardware, sloping case, PCB, power adaptor and pre-punched screened front panel

K 5415

EA Apr '98

NEW FOR '99

$59.95

Video Enhancer and Stabiliser

- Improves image quality from poor-quality video tapes
- Reduces image degradation when making copies of your own family recordings
- Includes circuitry which offers more stable viewing of video signals by stripping out 'piggyback' information
- Enhancement circuitry allows fully adjustable boosting between zero and approx 8dB at any of the three selectable frequencies
- Power source required: 240V AC
- Supplied with all specified components, PCB, plastic instrument case and pre-punched, screened front panel

K 5411

EA Nov '97 **$69**

Mini Stereo Amplifier

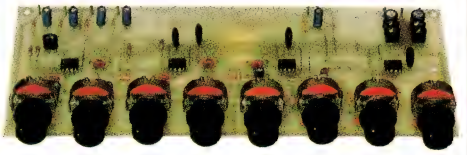
- This inexpensive circuit can give you the flexibility of a home hi-fi on your desk
- Uses your personal stereo as the 'brains' of the operation
- Utilises a tiny 8-pin DIL device which contains 2 amplifiers
- Output power: 1 watt into 8ohms (@ 9volts)
- Power source required: 1.8-12V DC
- Supplied with components, PCB, hardware, front panel label and case

K 5008 SILICON CHIP Oct '92 **$29.95**

15W Stereo Amplifier

- A versatile and compact amp which can be used in various applications
- Output power: 15W per channel into 4 ohms
- Features bass, treble, balance and volume controls
- 3-way input selector switch (CD, tuner and TV)
- Frequency response: 10Hz to 100kHz – 3dB
- Harmonic distortion: 0.05% @ 14W RMS into 8 ohms
- Power source required: 240V AC
- Supplied with components, hardware, PCB, deluxe case and pre-punched, screened front panel

K 5610 EA Dec '94 **$95**



Mixer Pre-amp

- 4-channel mixer pre-amp
- Has separate bass, treble, mid-range input and out put level control
- Frequency response: 18Hz-35kHz (+/-3dB)
- Power source required: +/- 15 volts DC
- Supplied with PCB, components and hardware
- Case optional (use H 2481)

K 5400 SILICON CHIP Jan '92 **$56.95**

50W Stereo Amplifier

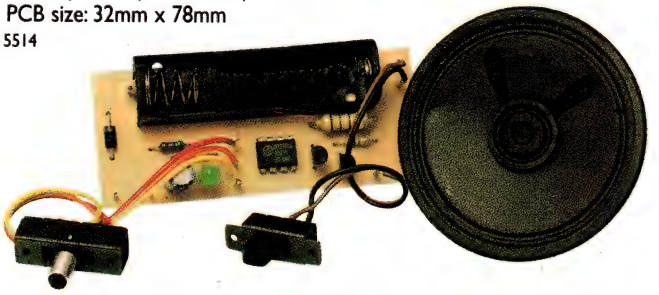
- Compatible as a basic amplifier, it's ideal for your home stereo
- A coupler socket and switch setup is included in the design which provides a direct stereo patch point between the output of the pre-amp and the input of the power amplifier
- Allows other equipment such as power amp or subwoofer amp to be connected in parallel
- Output power: 54W RMS (single channel) 46W RMS (both channels)
- Input sensitivity: 1V
- Frequency response: 20Hz to 30kHz +0/-0.5dB
- Harmonic distortion: < 0.04% (20Hz to 20kHz)
- Power source required: 240V AC
- Supplied with components, hardware, PCB, pre-punched case (powder coated matt black) and a pre-punched, screened front panel

K 5590 EA Jul '96 **$229**

Siren Generator Kit

- Just a flick of a switch will sound police, ambulance or fire engine sirens
- With just a slight alteration you can also get it to emit the sound of a machine-gun firing
- Power source required: 1.5V battery (AA cell)
- Supplied with components, PCB, battery holder and speaker
- Case optional (use H 2853)
- PCB size: 32mm x 78mm

K 5514

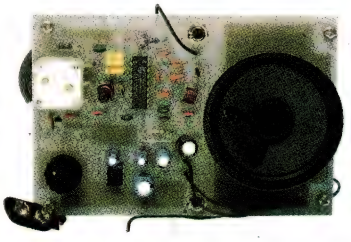


SILICON CHIP Nov '93 **$11.50**

AM Radio Trainer

- Teach yourself the basic principles of how a superheterodyne radio works
- Uses commonly-used parts and everything is mounted on a single PCB
- Power source required: 9V battery
- Supplied with components, PCB and hardware (including battery holder)
- PCB size: 91mm x 277mm

K 5016 SILICON CHIP Jun '93 **$29.95**



FM Radio

- Great hands-on way to learn about Radio Frequency (RF) circuits and Audio Frequency (AF) amplifiers
- Power source required: 9V battery
- Supplied with components, PCB and speaker
- Case optional (use H 2852)
- PCB size: 86mm x 128mm

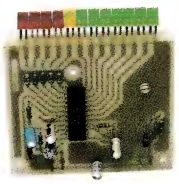
K 5014 SILICON CHIP Nov '92 **$34.90**

Weather Radio

- Once you've tuned in with the weather radio, you'll be up-to-date with the latest weather reports
- Its frequency coverage extends from 200kHz up to 580kHz
- Covers the airport weather beacons available in your local area
- Power source required: 9V battery
- Supplied with components, hardware, PCB, case, front panel label

K 5022 SILICON CHIP Sep '94 **$24.50**

12 LED VU Meter



- Design offers fast response and peak hold display
- Power source required: 11-40V DC
- Supplied with PCB, red, yellow and green LEDs, plus all necessary components
- Case optional (use H 2851)

K 5370

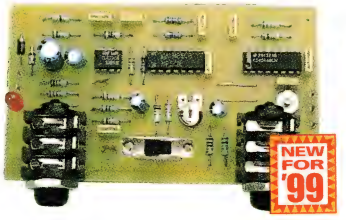
SILICON CHIP Feb '93 **$24.95**

Guitar Practise Amp Module

- Ideal for practising your favourite riffs at home
- Output power: 4 watts into 4 ohms
- Power source required: 12V DC (nominal)
- Supplied with components, PCB, hardware such as pots, knobs, heatsink and front panel label
- Case optional: cabinet design details shown in the instructions
- PCB size: 48mm x 62mm

K 3548

AEM Aug '88 **$29.95**



NEW FOR '99

Wah-Wah Guitar Kit

- Popular guitar effect is controlled by a foot pedal (not included)
- Resulting sound produces suddenly increasing/decreasing volume
- Includes PCB stakes, PCB, components and PCB mounted 6.75mm sockets

K 5620

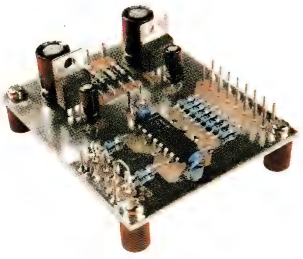
SILICON CHIP Sep '98 **$26.95**

Stereo Simulator

- Converts 'old favourite' movies to stereo sound
- Brilliant low-cost device turns almost any mono signal into synthetic stereo sound
- Simple to construct and use
- Supplied with components, hardware, case, front panel label and 9V DC power adaptor

K 3421

EA Apr '83 **$29.95**



Video and Pulse Distribution Amp

- Distributes composite video, S-video signals or frequency/time reference signals to a number of locations
- No loss of signal or image when connecting up to four monitors from a single source
- Very wide band-width useful for driving multiple computer monitors from a single video graphics adaptor
- Great for labs, schools and colleges
- Supplied with components and PCB

K 5413

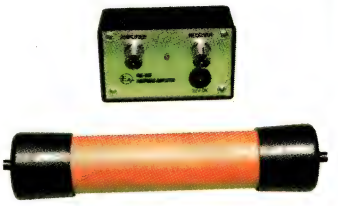
EA Dec '97 **$42.95**

Budget Karaoke

- Using principles employed by recording studios
- Replaces the vocals on any of your favourite tapes or CDs with your own
- Includes 'gain' and 'null' controls for sensitivity and signal balance
- Power source required: 2 x 9V batteries
- Supplied with PCB, components, hardware, case and pre-punched, screened front panel

K 5300

EA Nov '91 **$19.95**



VHF-UHF Masthead Amplifier

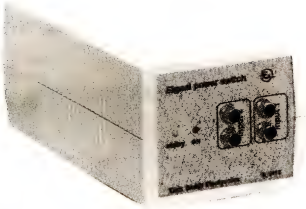
- Use this updated wideband amplifier to boost signal strength
- Provides stable amplification of at least 9dB to 2GHz
- Great for improving TV and other signal reception in the VHF and UHF bands
- Power source required: 9V DC
- Supplied with all components, hardware, PCB, casing, pre-punched front panel and power adaptor

K 5801

$49.95

NEW FOR '99

EA Jun '98



Signal-triggered Mains Switch

- Turns on your entire home entertainment setup/hi-fi system with just one switch!
- Activate any piece of gear that needs to be on when audio signals are present
- With extra safety features
- Comes with all components, PCB, case, pre-punched and screened front panel
- Power supply 240V AC

K 5418

$49.95

EA Oct '98

Video Fader and Wiper

- Good for home videos, allows professional post-production
- Fade out one image and into the next or wipe-out from one image to another, either horizontally or vertically
- Built-in enhancement facility to compensate for picture degradation caused by video dubbing
- Power source required: 12V DC
- Supplied with all components, hardware, sloping case, PCB, power adaptor and pre-punched screened front panel

K 5415

NEW FOR '99

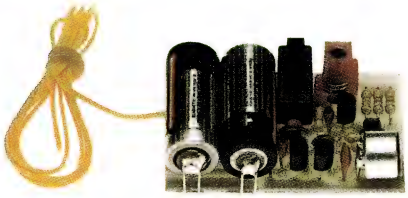
EA Apr '98 **$59.95**

Video Enhancer and Stabiliser

- Improves image quality from poor-quality video tapes
- Reduces image degradation when making copies of your own family recordings
- Includes circuitry which offers more stable viewing of video signals by stripping out 'piggyback' information
- Enhancement circuitry allows fully adjustable boosting between zero and approx 8dB at any of the three selectable frequencies
- Power source required: 240V AC
- Supplied with all specified components, PCB, plastic instrument case and pre-punched, screened front panel

K 5411

EA Nov '97 **$69**



FM Wireless Microphone

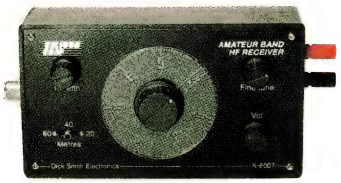
- Small enough to fit inside a matchbox
- Incredibly stable and sensitive circuitry
- Use it to monitor your baby, a distant telephone, or as a one way intercom
- Signals are transmitted at around 90MHz
- For a receiver, simply use your FM radio
- Power source required: 3 to 9 volts DC
- Supplied with PCB, components and batteries (2 x 'N' cells – S 3288)
- Case optional (use H 2855)
- PCB size: 31mm x 50mm

K 5006 SILICON CHIP Nov '89 **$19.95**

FM Stereo Transmitter

- Now you can connect this transmitter to your hi-fi and listen to your favourite music using your personal stereo cassette or FM headset radio
- Quiescent current: 3mA
- Harmonic distortion: 3% @ 200mV input
- Stereo separation: 45dB @ 107.9MHz
- Frequency range: 88.1 to 107.9MHz
- Power source required: 1.5 volt battery (use 'AA' cell)
- Supplied with components, hardware, case and front panel label

K 5004 SILICON CHIP Oct '88 **$34.80**



3 Band Amateur Receiver

- Listen to your most popular HF amateur bands
- Receives SSB, CW, RTTY & SSTV signals
- Tunes three 500kHz wide sections of the HF spectrum which include the 80, 40 and 20 metre amateur bands
- Frequency band:
  80m (3.5MHz – 4.0MHz)
  40m (7.0MHz – 7.5MHz)
  20m (14.0MHz – 14.5MHz)
- Power source required: 12 volts DC
- Supplied with components, hardware, PCB, pre-punched screened front panel and case

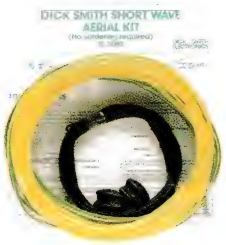
K 6007 SILICON CHIP Sep '96 **$59**

Speech Processor for Transceivers

- Now you can control the dynamic range of speech through your transceiver
- Simply connects in-line with your existing microphone
- Also acts as a pre-amp, compressor and speech filter, so your speech level at the other end is as clear as possible
- Generates a 'beep' each time the PTT button is released, to signal the end of your 'over'
- Power source required: 12 volts DC
- Supplied with components, hardware, PCB, die-cast box and front panel label

K 6002 EA Sep '91 **$29.95**

Shortwave Antenna Kit



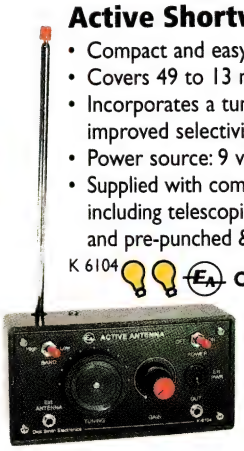
- Get the very best from your equipment with this high quality shortwave antenna
- Does not require soldering, instructions are included
- Supplied with approximately 25m of insulated copper, length of weatherproof rope and 'egg' insulators

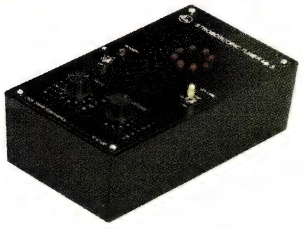
K 3490 **$29.90**

Active Shortwave Antenna

- Compact and easy-to-construct
- Covers 49 to 13 metre shortwave band
- Incorporates a tuned circuit for improved selectivity and image rejection
- Power source: 9 volt battery
- Supplied with components, hardware including telescopic antenna, PCB, case and pre-punched & screened front panel

K 6104 EA Oct '97 **$24.50**





Stroboscopic Tuner

- Tune your musical instruments
- Beat frequency is displayed graphically on a ring of LEDs
- Features visual or aural tuning
- Power source required: 9V – 12V DC
- Supplied with components, PCB, case, hardware and pre-punched screened front panel

K 5102 EA May '96 **$34**

Motorcycle Intercom

- 2-way communication
- Full duplex operation
- Single volume control for both channels
- Uses 4 x 'AA' batteries or power directly from motorcycle
- Includes all components, hardware, PCB, deluxe case and pre-punched screened front panel

Accessories not included

K 6021 EA Jul '98 **$39.95**

Versatile Solid State Audio Recorder

- Great for reminder messages to turn off your lights, put on your seatbelt or whatever you like!
- Record up to eight short messages or sounds
- Program them to replay in response to different trigger input signals
- Recorder IC allows you to re-record as many times as you like
- Total of 16 seconds recording time
- Features repeat selection and chime option
- Power source required: 10V – 20V DC
- Supplied with components, PCB and hardware items such as speaker, relay, IC, sockets and DIP switches
- Case optional (use H 2852)
- PCB size: 84mm x 145mm

K 5019 EA Feb '95 **$69**

Flux-Cored 60/40 Solder

General purpose, electronics grade flux-cored 60/40 (tin/lead) solder, suitable for most projects and repair work. Available in rolls or economical hobby tubes.

Hobby Tubes		
1.0mm	N 1637	$1.50
0.8mm	N 1639	
100 Gram Rolls		
0.56mm	N 1627	$4.95
0.90mm Savbit	N 1629	
200 Gram Rolls		
1.25mm	N 1619	
0.17mm	N 1623	$8.50
0.91mm Savbit	N 1621	

Service Aids

Hakko Wick De-Soldering Braid

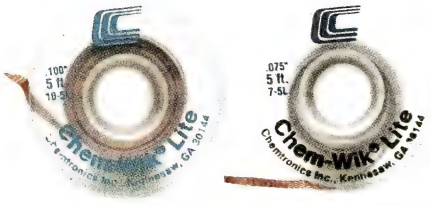
Works at lower temperatures than conventional types and uses an odourless, non-corroding flux to eliminate cleaning after de-soldering.

Description	Cat No.	Price
1.5m x 1.3mm	N 1810	$4.50
1.5m x 2.0mm	N 1812	$4.95
1.5m x 2.5mm	N 1814	$4.95

Chem-Wik Lite De-Soldering Braid

1.5m x 1.9mm	Green	N 1680
1.5m x 2.5mm	Blue	N 1681

$4.95 ea



Nimrod Microwick

2m roll x 3.0mm
N 1800
$4.95

95/5 Tin Antimony Solder

Lead-free, non-toxic, acid-cored solder perfect for soldering copper, brass, tin, jewellery etc. Not suitable for electrical or aluminium work. 1.4mm x 7g.
N 1624
$3.25

General Purpose 5-Core

40/60 (tin/lead) solder with non-corrosive flux core suitable for electrical and general purpose applications. Comes in a 1.4mm x 14g pack.
N 1634
$4.50

Tip Tinner and Cleaner

A fast and efficient method of cleaning and re-tinning soldering iron tips. 15g tin.
N 1648
$9.95

Solder Paste

This 96/4 (tin/silver) solder is lead free and ideal for most metals including stainless steel. Not recommended for electrical/electronics use. Comes in 7g syringe.
N 1644
$8.50

Lead Free Solder

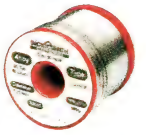
Designed as a substitute for tin/lead cored solder. This solder is a 99.3% tin/0.7% copper alloy. It has a melting point of 227°C. 0.71mm diameter. 200g roll.
N 1628
$8.50

Aluminium Solder

Alu-Sol is an aluminium-based solder used for joining aluminium, most alloys and dissimilar metals. Requires no additional flux or surface preparation. 1.6mm x 100g roll.
N 1625
$12.50

Solder 1.25mm

500g roll 60/40 Tin/Lead.
N 1650
$19.95



Tapes

Coloured Insulation Tape

Hard wearing coloured insulation tape. 19mm x 18m rolls. Six colours to choose from:

Description	Cat No.
White	N 1358
Green/yellow	N 1359
Orange	N 1360
Red	N 1361
Black	N 1362
Blue	N 1364

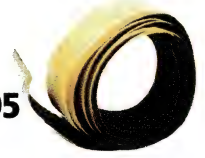
$1.45 ea

Cling Amalgamating Tape

2m roll.
N 1376
$8.95

Cling Felt Tape

48mm x 1m.
N 1375
$6.95



Cling Tape

If you want it to stay put, you need Cling! Our wide range has a Cling tape for every purpose.

Description	Cat No.	Price
Double Sided		
Indoor 12mm x 2m	N 1380	$3.95
Outdoor 12mm x 5m	N 1382	$8.95
Indoor 24mm x 2m	N 1384	$6.95
U.S Gaffa Tape		
Black 10m	N 1398	$6.95
Black 20m	N 1430	$14.95
Black 40m	N 1431	$24.95
Silver 10m	N 1408	$7.95
Silver 20m	N 1432	$14.95
Waterproof Tape		
24mm x 4.5m	N 1504	$2.45
Fire Retardant Tape		
Black 20m	N 1377	$6.95
Strips		
Hook and loop strips	N 1524	$3.95
Mounting pads	N 1546	$1.45
Lumi Tape – 12hr glow	N 1545	$5.95

ELECTROLUBE

Tamper Lacquer (Green)
Bloc'Lube is an air drying seal for screws, nuts and other 'factory fixed' components where evidence is required that the product has not been opened. Seal becomes brittle after 24 hours. 15ml bottle.
N 1210 **$6.95**

Anti-Static Foam Cleanser
Anti-static foaming cleanser for surfaces prone to static dust attraction, such as plastics, metal and glass. 200ml aerosol.
N 1145 **$9.95**

Plus 2X Contact Lubricant
Increases contact performance and life, ensuring reliability. 5ml/5g pen.
N 1047 **$9.95**

AF PC-Clene
These wipes are impregnated with a biodegradable solution for cleaning monitors, glass, plastic surfaces of PCs and other office equipment.
N 3107 **$9.95**

Multi-purpose Grease
Lubricating grease for electrical and mechanical applications. 50ml/4g tube.
N 1132 **$9.95**

Permagard
Multi-purpose maintenance fluid dries out damp electrical connections, penetrates corroded parts and lubricates.
N 1120 **$11.95**

Ultrasolve Non-CFC Cleaning Solvent
Efficient cleaning of electrical contacts, computer equipment etc. Removes grease from PCBs.

200ml aerosol
N 1170 **$14.50**

400ml aerosol
N 1172 **$24.50**

Weller

Butane Gas
200g. Suits Portasol butane soldering irons.
N 1092 **$7.50**

Contact Cleaner Lubricant
Cleans and lubricates electrical contact surfaces. 200ml aerosol.
N 1118 **$16.95**

Electronic Cleaning Solvent
Non-toxic cleaning solvent for delicate electronic components.
N 1041 **$16.95**

Clear Protective Lacquer
Protective coating for PCBs etc to keep out salt, dust and moisture.
N 1130 **$17.50**

Fluxclene
An aerosol solvent for removing contaminants and flux after soldering. Ozone-friendly 400ml can.
N 1112 **$24.50**

Isopropanol Cleaning Solvent
Internationally approved cleaning solvent, safe to use on most plastics. 400ml can.
N 1095 **$27.95**

MCF Spray Freezer
Powerful refrigerant for instant cooling of small component to -50° C. 400ml aerosol.
N 1113 **$29.95**

RONSON

Butane Gas
100g, 167ml container.
N 1081 **$4.95**

30g container.
N 1082 **$3.50**

Air Duster
Removes dust from delicate or inaccessible areas of electronics such as cameras and computers. 400ml can.
N 1150 **$29.95**

WD-40
Lubricates, displaces moisture, penetrates, protects and cleans! 255g spray.
N 0104 **$3.95**

60g spray Handican.
N 0105 **$2.95**

DSE Freeze Spray
Instantly cools small components for detecting faults. 250g can.
N 1190 **$14.50**

DSE Air Jet Spray
Removes dust and lint from electrical equipment such as computers and cameras.
N 1195 **$14.50**

DSE Contact Cleaner
Non-flammable contact cleaner for electronics, PC boards, television, computers and phones.
N 1197 **$11.95**

DSE Lubricant
Non-flammable lubricant for PC boards, cameras, computers, telephones, medical applications.
N 1196 **$9.95**

CRC Screen/CD Cleaner
Non-streaking, removes dust, fingerprints, grease, bacteria, smoke, dirt etc from VDU screens and compact discs. 200g can.
N 1084 **$7.95**

808 Silicon Spray
Gives a durable odourless film that revives, lubricates, waterproofs and protects. 330g can.
N 1064 **$14.95**

CO Contact Cleaner
Harmless to most plastics. Evaporates rapidly and completely. 350g can.
N 1072 **$19.95**

CRC 2-26 Lubricant
Improves motor generator winding insulation resistance. Lubricates and protects. 500g can.
N 1060 **$14.50**

CRC

Switch Clean/Lube
Cleans away oil, grease, dust and atmospheric contaminants. 300g can.
N 1074 **$13.95**

Video/Audio Cleaner
Great for cleaning audio and video heads. Non-corrosive and non-staining. 150g can.
N 1079 **$14.95**

Adhesives

Super Glue
3ml tube. N 1217 **$2.95**

10ml bottle. N 1219 **$7.95**

Contact Adhesive
Easy-to-apply and gives a lasting bond. The flexible nature of the joint helps give long life where movement is a problem. 50ml.
N 1224 **$4.95**

Hobby Glue
A clear adhesive for wood, glass, metal, leather, fabric, paper and most plastics (test plastic first). 50ml.
N 1229 **$4.95**

Super Glue Bottle & Brush 4g
No waste, easy to apply.
N 1233 **$4.95**

5 Minute Epoxy
Two-part mix & hard-wearing, Epoxy glue is used for most repairs requiring a gap-filling compound. 24ml easy-mix.
N 1228 **$7.95**

Silastic 732RTV
Adheres to seals and insulates rubber, wood, glass, metal, plastic etc. Acid curing in a 150g tube. Clear
N 1227 **$8.95**

Un-Du Label Remover
Removes adhesive and retains sticker adhesiveness, evaporates rapidly. Includes spade to lift stickers cleanly. 30ml bottle.
N 1204 **$9.95**

QuickTite Gel Super Glue Gel 3g

Fast bonding speed, self-piercing gel tube, no more clogging.
N 1201 **$2.95**

Liquid 5ml
Pin cap prevents clogging, long nozzle for easier application, clear, no squeeze bottle prevents spills and stands upright for easy storage. N 1202 **$4.95**

Everything you need for making and repairing PCBs

Direct Etch Pen
It's so easy to use! This pen is fitted with a lacquer ink which is impervious to aqueous PCB etch solutions. Ideal for touch-ups or direct etch boards.
N 5181 **$7.95**

Ammonium Persulphate

Special long-lasting compound for use when etching PCBs. 600g.
N 5654 **$9.95**

Ferric Chloride Etchant

Supplied in a handy 500ml no-spill bottle of working solution (ferric chloride).
N 5652 **$14.95**

Positive Photo Resistant PCB
Includes 2 PCBs sizes: 100 x 80mm and 80 x 50mm. Suitable to use with technical design PCB kits.
N 5985 **$7.50**

Technical Design PCB Kit #1
With 2 x pre-sensitised PCBs, knife, developer, 8 x donut pad sheets, 3 x PC artwork tapes and 4 x (DIP) pattern sheets.
N 5981 **$19.95**

Technical Design PCB Kit #2
With PCB template, 2 x pre-sensitised PCBs, knife, developer, 8 x donut pad sheets, 4 x PC artwork tapes, 4 x (DIP) pattern sheets, number and alphabet kit, keypad patterns, 'TO' transistor patterns.
N 5982 **$17.95**

Etching Kit

Everything you need for making PCBs; instructions, PC resist pen, etchant and sample PCBs.
N 5651 **$28.95**

Electrolube Developer

Suits positive resist (N 1003). It's safer and simpler than mixing caustic solution. Simply develop your pattern in this, dry and etch. 250ml/300g bottle of 4:1 concentrate.
N 1002 **$18.50**

High Resolution Positive Resist

Easy-to-use and can be exposed to any UV light source (even the sun). Develops in caustic solution or Electrotube developer (N 1002). 200ml/200g spray.
N 1003 **$38.95**

Technical Design PCB Kit #3
With 2 x PCB templates, 2 x pre-sensitised PCBs, knife, developer, 10 x donut pad sheets, 5 x PC artwork tapes, 6 x (DIP) pattern sheets, number and alphabet kit, keypad patterns, 'TO' transistor patterns.
N 5983 **$39.95**

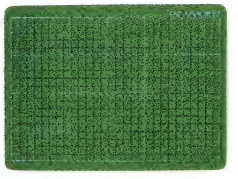
UV Exposure Box

This high quality Kalex UV exposure box is ideal for schools, TAFE's small businesses or home use, providing an easy way to expose sensitised PCBs. This product requires a W-1362 IEC mains lead (not supplied).
N 5986 **$299**

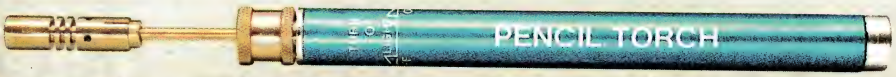
PCB Bubble Etching Tank

This high quality PCB etching tank is ideal for PCBs up to 20 x 25cm in size and includes simple PCB clips for easy handling. It is suitable for etching single and double sided PCBs and can also be used with an optional air pump & heater (not supplied) for faster and more efficient etching.
N 5988 **$54.95**

Circuit Works Conductive Pen
Silver-based pen ideal for electronic design, prototype and repair applications.
Use Circuit Works to link components, repair defective traces and shield delicate electronics. Dries in minutes, solderable at low-temperatures. 8.5g pen.
N 5184 **$29.95**

A4 Size Cutting Mat


Has a handy grid. This mat is ideal to protect your table or workbench from knife marks.
N 5989 **$3.95**



Economy Pencil Blowtorch

Great for heatshrink work, silver solder, gold, silver, brazing or glass work. It fits easily in your pocket and is powered by butane gas.
T 1380

$9.95

Microjet Butane Blowtorch

A pocket-sized blow torch that's very cheap to run – just clip in the supplied gas refill. With easy to start piezo auto-ignition, it's flame heats up to 1300°C maximum in just a few seconds.
T 1366

NIMROD

$29.95

Refill To Suit Microjet Torch T 1363 **$1.50**

Mini Blowtorch

Butane powered blowtorch with simple push-to-start electronic piezo ignition and large gas storage capacity. The flame is fully adjustable, and the unit can either be hand-held or placed on the benchtop in its supplied stand. (Butane gas not included).
T 1390

$55

Butane Soldering Iron *Fits In Your Pocket!*

Ideal for service people, handymen and technicians, this medium duty butane powered iron gives up to 60 minutes of continuous use at full power (the equivalent of 60 watts) and is built to last. It provides an adjustable temperature control from 10 to 60 watts (400°C maximum). Supplied with a long-life soldering tip.
T 1370

Weller/portasol

$49.95

Accessories

1.0mm Tip	T 1372	$19.95
2.4mm Tip	T 1369	$19.95
3.2mm Tip	T 1371	$21.50
4.8mm Tip	T 1373	$21.95

'Pocket' Soldering System *4 Tools In One!*

This patented Portasol P-1KC kit includes a heavy-duty butane powered soldering iron plus blow torch, hot blower and hot knife tips all in a handy storage case. With the equivalent of 10-60 watts of power and temperature adjustment up to 400°C for soldering and 1200°C for blowtorch use, it's ideal for the hobbyist, handyman or professional technician. Heats up within 40-60 secs to soldering temperature.
T 1374

Weller/portasol

$89.80

Accessories

1.0mm Soldering Tip	T 1375	$21.95
2.4mm soldering Tip	T 1378	$22.95

Two-in-One Butane Soldering Iron

A medium sized butane powered blowtorch with adjustable flame as well as a soldering iron tip. Maximum blowtorch temperature of 1300°C, and soldering temperature of up to 400°C.
T 1396

$36.90

2.5mm Solder Tip	T 1407	$6.95
2.5mm Solder Tip/Catalyst	T 1405	$12.95

NEW FOR '99

Pyropen Junior Soldering Iron

Quality butane powered WSTA-6 soldering iron with 1mm iron-plated tip, piezo ignition, adjustable power control (approx 15-60W), 30 second heat up time and up to 60 minutes operation per recharge. Includes hot blower tip and protective cap. Made in Japan.
T 1425

Weller

$99.95

Heavy Duty Portasol Kit

The PSI-100K is a rugged, professional use butane-powered soldering iron complete with a range of tips, all packed in a solid plastic case. Applications include soldering, heatshrinking and rope cutting. Features include a large butane reservoir, allowing up to 2 hours operating time, as well as an Auto Switch safety shut off, heavy duty iron plated tips, and an in-built fuel filter.
T 1398

Weller/portasol **$149**

Accessories

1.0mm Soldering Tip	T 1397	$25.75
2.4mm Soldering Tip	T 1399	$25.75

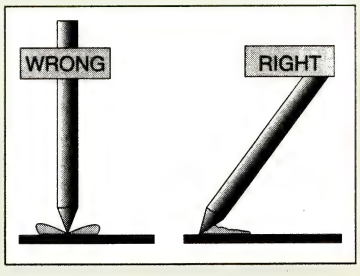
The Easy Way To Solder

For projects and repair jobs, properly soldered connections are a must. But, if you're just starting out in electronics, a little friendly advice will help you get it all together.

ONE: Make sure the surfaces to be soldered are clean. A little dirt or grease (even from just handling components with your bare hands) will make it just that much harder for the solder to attach itself to the connection being soldered. A small file, sandpaper or a wire brush can be very useful for this. When soldering electronic equipment, you should always use resin-cored solder.

TWO: Before you use a new soldering iron for the first time, coat the tip with solder to prevent oxides from forming, then immediately brush off the excess with a soft, damp cloth to form a smooth, silvery soldering surface. This is called 'tinning' and should be done periodically to ensure efficient soldering.

THREE: Apply the tapered surface of the iron's tip to the connection, then apply solder (see illustration). Don't use the iron's tip to directly melt solder – let the connection melt it for you. Otherwise you may create a 'cold' solder joint – one that is likely to fail later.



FOUR: When solder begins to flow, carefully lift the iron's tip away from the job while keeping the connection stable.

FIVE: When soldering delicate components, work quickly and use a heatsink to draw off damaging heat.

Affordable Quality From Dick Smith Electronics!

Easy-to-use and extremely efficient soldering irons. With 240V operation, 370°C operating temperature, long-life replaceable tips and lightweight handles. Approved by electrical authorities, they meet Australian Standard number 3114.

25 Watt	T 2300	**$19.95**
40 Watt	T 2305	**$26.95**
80 Watt	T 2315	**$36.95**
Replacement Tip for 25 Watt 4mm Conical	T 2301	**$3.95**
Replacement Tip for 40 Watt 5mm Double Flat	T 2306	**$4.95**
Replacement Tip for 80 Watt 7mm Double Flat	T 2316	**$6.95**

Safety 25W Soldering Iron

Fitted with a non-burn silicon style mains cable, this special version 25W Hotrod soldering iron is well suited for users such as schools and colleges where safety and ease of use are of prime concern. Supplied with a 4mm plated tip.

T 2303

Replacement Tip T 2301 **$3.95**

$36.95

25W Mains Powered

An air-cooled finger grip makes this iron ideal for continuous use. Rated at 25W, 360°C, it has a long-life earthed tip and barrel for added safety.

T 1619

Spares: 4mm Flat Tip T 1623 **$6.25**

$28.50

15W Soldering Iron

Ideal for light to medium range soldering work. Rated at 15 watts and mains-powered, it's incredibly efficient with impact and heat resistant handle and replaceable nickel and iron-plated tip. Also features a stainless-steel barrel and ceramic-filled element for long life.

T 1310

Pk 2 Spare Tips T 1312 **$8.50**

$36.95

CooperTools

5-Piece Soldering Kit

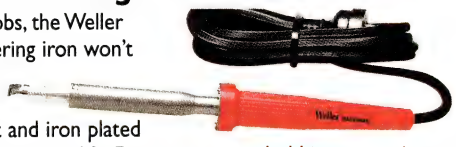
A great gift for any budding electronics enthusiast, or as a standby repair tool kit. This quality general-purpose soldering iron comes complete with resin-core solder, an iron stand and cleaning sponge, plus two screwdrivers. Rated at 25W 240V.

T 1652

$36.95

SCOPE

80W Marksman Soldering Iron



For those really heavy jobs, the Weller SP-80D Marksman soldering iron won't let you down.

It's stainless steel barrel, ceramic heating element and iron plated tip provide fast heat-up and long life. Features easy-to-hold impact resistant handle, and is supplied with a replaceable 9.5mm tip. Australian made.

T 1315 **12 MONTH WARRANTY**

Soldering Iron Tip 6mm T 1317 **$18.95**

Weller **$69.95**

Accessories for Nimrod Butane Irons (limited stock)

Cat No.	Description	Price
T 1386	Tip 1mm (S1)	**$8.95**
T 1387	Tip 2mm (S2)	**$8.95**
T 1388	Tip 3mm (S3)	**$8.95**
T 1389	Tip 4mm (S4)	**$8.95**
T 1394	Catalyst (S9)	**$8.95**
T 1391	Hot Knife (S5)	**$13.95**
T 1392	Torch Tip (S6)	**$14.50**
T 1393	H/Air Tip (S7)	**$13.95**

Adcola Replacement Tips (limited stock)

Cat No.	Description	Suits	Price
T 1831	Tapered Chisel Face 1mm	T 1820/30	**$8.50**
T 1832	Bevel Face 3mm	T 1820/30	**$9.95**
T 1853	Short Chisel Face 2.5mm	T 1820/30	**$8.50**
T 1855	Wedge Face 2mm	T 1820/30	**$6.75**
T 1826	Bevel Face 2.5mm	T 1825/40	**$6.95**
T 1827	Short Chisel Face 2.5mm	T 1825/40	**$4.95**

Scope Transformer

This high-quality 30A (intermittent) transformer saves accidental damage to sensitive components by powering various Scope irons at low voltages and is double insulated for extra protection. Comes with an iron rest and tough, polypropylene case.
T 1692 **$89.95**

Scope Accessory Lines

Our Silverwater Mail Order Centre stocks a range of spare parts to suit Miniscope and Superscope soldering irons. Not available in stores.

Miniscope	Cat No.	Price
Stainless Barrel	T 1693	$16.95
Ceramic Beads (4pcs)	T 1694	$5.50
Pushrod Assembly	T 1695	$18.50
Flexible Lead	T 1696	$18.25
Plastic Handle	T 1697	$8.50
Centre Piece	T 1698	$4.95
Superscope	**Cat No.**	**Price**
Stainless Barrel	T 1653	$17.50
Ceramic Beads (4pcs)	T 1654	$5.95
Pushrod Assembly	T 1655	$18.75
Flexible Lead	T 1656	$18.95
Plastic Handle	T 1657	$12.75

12V 20-40 Watt Soldering Iron

The ideal iron for on-site service and repairs, it's rated at 12V 20-40 watts and is both fast to heat and fast to recover. Comes with interchangeable long-life tip, 2 metre power lead and large insulated battery clips.
T 2100 **$27.95**

Spare Tips

Medium chisel	T 2002	$9.95 ea
Thick chisel	T 2004	
Fine conical	T 2006	

60W Temperature Controlled Iron

A lightweight, 60-watt iron suitable for working on transistors and printed circuits through to heavy electrical connections. The ceramic filled element provides precise temperature control, minimises heat wastage and has a fast heat and recovery time. With a pre-tinned 1.5mm long-life iron-plated tip.
T 1345 **$135**

CooperTools — Quality Endorsed Company

Spare Tips

1.58mm Chisel Tip	T 1347	$15.95 ea
3.17mm Chisel Tip	T 1348	

Superscope Soldering Iron

For those heavier soldering jobs. Heats up in a fast 6 seconds! With huge 140W capacity, manual temperature control, auto-off function and long-life stainless steel barrel. Complete with spare tip and element. Requires approx 3-5V at 30A.
T 1605 **$75**

Spare Tip and Element Pack T 1603 **$14.50**

Miniscope Pencil Iron

Ideal for general service work and kit building, this 10-70W pencil iron is lightweight and easy to use, with 6 second heat-up and fingertip lever for precise temperature control. It comes with a spare tip and element and requires approx 3V @ 30A, so it's best used with the Scope Transformer (T 1692).
T 1660 **$79.95**

Spare Tip & Element Pack T 1601 **$14.25**

Scope C60 Cordless Soldering Iron

Based on the Miniscope's fast 6 second heating time and manual temperature control, the Scope C60 cordless iron has in-built rechargeable batteries and provides easy 10W to 60W trigger heating control with auto switch off. Includes AC overnight charger. *Limited stocks.*
T 1720 **$149**

Economy Soldering Station

Affordable quality for the technician or enthusiast. This new soldering station provides variable temperature control from approx. 250°C to 450°C, plus zero voltage crossing circuitry for low noise operation. While not a sensor compensated temperature controlled design it is suitable for a wide range of soldering applications. It features a lightweight soldering pencil with heat-resistant cable, iron holder and tip cleaning sponge, and is fully Energy Authority approved. Supplied with a long-life 1.6mm plated tip.
T 1975 **$125**

Spare Tips

0.8mm Chisel Tip	T 1977	$9.95 ea
1.6mm Chisel Tip	T 1978	
3.2mm Chisel Tip	T 1979	

Hot-Melt Glue Gun

A mains-powered 40W glue gun with convenient trigger controlled glue feed. Takes 11mm diameter glue sticks.
T 1410 **$29.50**

Pk of 6 100mm x 11mm glue sticks T 1421 **$3.95**

Heat 'n' Strip Gun

Ideal for heatshrink work, removing old paint, removing vinyl tiles, loosening rusted or over-tightened nuts, drying and more. It's lightweight, mains operated and has a dual temperature range (400° and 600°C). 1600W rated.
T 4845 ARLEC **$79.95**

Solder Roll Holder/Dispenser

Strong metal construction with a non-slip base.
T 1295

$19.95

Fume Extractor/Filter

At last, an affordable fume extractor/filter to reduce fumes generated while soldering. With a strong metal case, this 240V mains powered unit is placed next to the soldering activity where it draws fumes through a dense carbon filter and directs them elsewhere. Includes 2 filters and IEC-style mains lead.
T 2550

$139.95

The DSE Soldering Station

Our most popular soldering station!

Features fully electronic variable temperature control 150°– 450°C, a large temperature meter, and has Energy Authority approval. Includes a lightweight iron fitted with a silicon non-burn cable, iron holder, cleaning sponge, a medium chisel tip and a comprehensive instruction manual.
T 2000

$158

Accessories to Suit

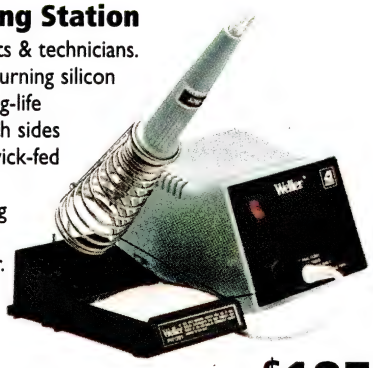
Description	Cat No.	Price
Tip Fine Conical	T 2006	$9.95
Tip Medium Chisel	T 2002	$9.95
Tip Thick Chisel	T 2004	$9.95
Element and Barrel	T 2008	$41.75
Sponge Replacement	T 2010	$2.25

Surface Mount Accessories

Surface Mount Device Adaptor		
Adaptor to suit SMT Tips	T 2042	$10.50
Desoldering Tips		
23 x 17mm Box Type	T 2030	$42.50
7 x 12.5mm Tunnel Type	T 2031	$29.75
6 x 10mm Tunnel Type	T 2032	$29.75
6 x 5mm Tunnel Type	T 2033	$29.25
IC and IC Socket Remover		
8-pin	T 2034	$27.50
16-pin	T 2035	$29.75
18-pin	T 2036	$31.50
24-pin	T 2037	$32.50
Soldering Blade Tips and SMD Removers		
10mm Large	T 2038	$10.95
5mm Small	T 2039	$10.95
2.1 x 1.5mm Small	T 2040	$10.95
3.2 x 1.5mm Large	T 2041	$10.95

Weller WTCPT Soldering Station

The first choice of many hobbyists & technicians. Design features such as its non-burning silicon rubber soldering pencil cable, long-life iron-plated tips, lock slots on both sides of the soldering iron stand and wick-fed tip-cleaning sponge make Weller a name you can trust! The heating element (48W max) operates from an internal 24V transformer. Supplied with a 370°C screwdriver tip as standard.
T 3000



$185

Spare Tips at $9.95 ea

1.6mm Spade (370°C)	T 3020
1.6mm Screwdriver (370°C)	T 3003
1.6mm Screwdriver (430°C)	T 3004
2.0mm Long S/driver (315°C)	T 3015
2.0mm Long S/driver (370°C)	T 3016
2.4mm Screwdriver (370°C)	T 3022
2.4mm Screwdriver (430°C)	T 3023
3.2mm Screwdriver (430°C)	T 3026

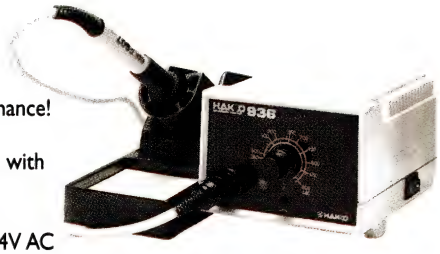
Weller

AUSTRALIAN MADE

Description	Cat No.	Price
Spare Sponge	T 3010	$4.95
Power Unit	T 3018	$139.00
Handle Assembly	T 3019	$139.00

Hakko 936 Soldering Station

Well known in the professional service industry, this high-quality general-purpose soldering iron delivers superb performance! Uses an accurate manual temperature control with ceramic heater sensor and zero-crossing heater switch systems. It's rated at 60W 24V AC and has an operating temperature of 200-480°C with super-quick heat-up and fast thermal recovery times. The iron comes complete with holder, cleaning sponge, tip and sponge tray. T 3810



$229

Tips to suit

Description	Cat No.	Price
17mm, 0.5mm conical	T 3802	$14.95
25mm, 0.2mm conical	T 3804	$18.75
17mm, 1.6 x 0.5mm flat	T 3806	$13.50
17mm, 2.4 x 0.5mm flat	T 3808	$15.50

One-Shot Desoldering Tool

The one-shot 60W portable desoldering tool is a lightweight, self-contained, 240V powered unit that uses a fast acting vacuum pump for almost effortless desoldering of joints. Made from tough high-temperature Hytrell and Valox plastics together with a super-hard heating head, it provides adjustable electronic temperature control and a grounded heater element to reduce static. Supplied with long-life solder filters, high-temperature tweezers and stand.
T 2500

$199

Solder Sucker

Bargain Price!

Ideal for light-duty reworking jobs and the removal of solder from electronic circuit components. Designed for easy one-hand use, its tip and barrel are fully removable for easy cleaning.

T 2561 **$9.50**

Replacement Tip T 2562 **$1.95**

Solder Sucker

A handy, small sized de-soldering tool for repairing PCBs and other delicate work. It's lightweight metal barrel makes it easy to use and it comes with a removable teflon tip.

T 2563 **$10.75**

Replacement Tip T 2564 **$2.95**

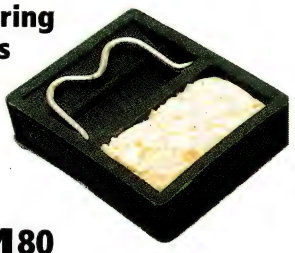
Anti-Static Solder Sucker

Lightweight and easy to use, this medium sized tool allows simple one-hand operation while removing solder from electronic circuits, etc. It's easy to clean with an anti-static teflon tip and strong metal barrel.

T 2567 **$16.95**

Replacement Tip T 2568 **$4.95**

Mini Soldering Iron Stands



A set of 2 pcs mini stands for use with small soldering irons. Complete with sponges for tip cleaning.

T 1309 **$4.80**

Soldering Iron Stand

A budget, lightweight soldering iron stand which makes working with your soldering iron that little bit easier. Comes with sponge.

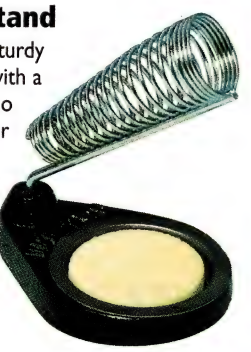
T 1303

$9.95

Quality Iron Stand

A well-balanced and sturdy soldering iron stand with a heavy cast iron base, so you can't knock it over easily. Comes complete with tip cleaning sponge.

T 1305 **$16.95**



Soldering Aid Set

This Soldering Aid Set is value-for-money. You get a fine-point and slotted end probe, scraper end and wire brush probe, angle scriber and scraper probe, aluminium heatsink and 170mm tweezers.

T 2606 **$9.95**

Heatsink Clip Set

Spring loaded, plier grip clips for heat sensitive components and leads. Made of aluminium for high thermal conductivity, two types (one straight, one angled), both are 75mm long. Made in Japan.

T 2620 **$9.95**

6" Straight Forceps

Quality stainless-steel locking forceps to hold leads or components in place while you work. Forceps have three locking teeth providing variable pressure, and coated handles for comfort.

T 4639 **$16.50**

Tweezers

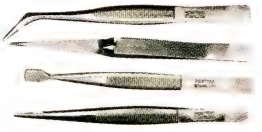
Fine-point tweezers for holding small nuts, components, delicate instruments, wires etc. Also great for pets – removing ticks! Made in Japan. Serrated Jaw.

T 4630 **$3.20**

Stainless-Steel Tweezers

These high-grade stainless-steel tweezers are ideal for use in the electronics and precision engineering industries as they are non-magnetic, acid-resistant, and have finely polished surfaces.

Fine Point	T 4632	**$4.95 ea**
Long Nose	T 4634	
Curved Nose	T 4636	

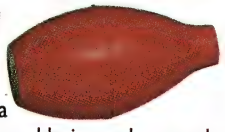


Universal Tweezer Set

Great value! Four different 110mm tweezers in one pack. With fine-point blades, flat blades, curved blades and even reverse action (squeeze to release).

T 4625 **$10.80**

'Vacu-Bulb' De-Soldering Tool



A quality de-soldering bulb with a teflon tip, for easy de-soldering and removal of excess solder. The fluorocarbon material used in the tip means it won't scratch or damage delicate PC boards.

T 2581 **$6.70**

Helping Hands

Exceptional Value!

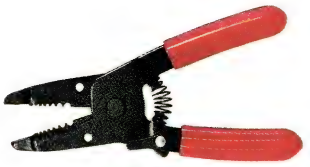
It's bargain priced and makes working on PCBs much easier! Includes a heavy cast iron base for added stability, a magnifying glass, plus alligator clips to hold the PCB still while you're working on it.

T 5715 **$9.95**

Economy Wire Strippers

Strong and sturdy with a large adjustable range, these wire [illegible] hardened jaws, are [illegible] and are bargain priced.

$4.95



3-in-1 Stripper

Three handy tools in one! A measured wire stripper, plier and wire cutter. With spring-loaded, insulated handles.

T 3165

$9.95

Deluxe Wire Strippers

A completely automatic wire stripper – one action is all it takes. Allows you to strip wires from 1-3.2mm. Solid metal construction.

T 3620

$19.75

Adjustable Wire Stripper

With a self-adjusting mechanism that allows stripping of PVC insulation from wire 0.5mm² to 6mm² in size without damaging the conductor. The stripping length is adjustable from approximately 3-25mm, and manual tension adjustment is available. With in-built cable cutter.

T 3622

$22.95

Hobby 'G' Clamp Set

Three handy 'G' clamps that are perfect for most hobby work and model-making. All fit the 30mm (diameter) magnetic base supplied. Sizes include 40mm x 35mm, 30mm x 30mm & 20mm x 25mm.

T 4755

$6.95

Hobby 'F' Clamp Set

Just like a spare set of hands for the workbench or toolbox! Includes three sizes: 20 x 120mm, 20 x 80mm and 20 x 40mm and all fit to the 38mm magnetic base included in the pack.

T 4750

$7.95

Mini Shifting Spanner

For those small and fiddly jobs, use this mini 100mm shifting spanner. Easy to carry in your top pocket, this solid metal shifting spanner has a comfortable dipped handle.

T 3304

$8.25

Int/Ext Circlip Pliers

A simple tool to use for both internal and external retaining rings used around the home or car. Metal blades with PVC coated handles.

T 3522

$8.95

Screwdriver-Type Alignment Tools

Non-conductive plastic shafted screwdrivers with steel spring tips. Suitable for adjusting trimmers and IF transformers in communications equipment.

[illegible]mm shaft **$3.25**

[illegible]mm shaft **$4.95**

Alignment Kit

Aligning your TV or receiver? No more searching for the right tool for the job! This versatile set designed especially for alignment applications comprises four general-purpose plastic tools created to cover virtually all shapes and sizes of cores. These easy-to-use, lightweight and economically priced tools will suit hex cores from 2 to 3mm, plus slotted cores from 1.5 to 2.5mm. Outstanding value.

T 4540

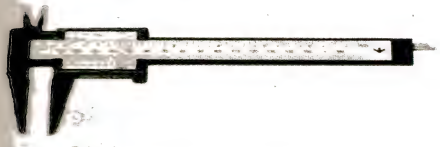
$5.95

Ceramic Adjusters/Alignment Tools

You'll find these high-quality adjusters perfect for computers, communication instruments, VCR, CD and other electronic devices. They're made from a combination of high-tech materials with zirconia ceramic blades and anti-static handles. Plus, they're non-conductive, non-magnetic, non-static and long-lasting.

0.9mm Flat	T 5200	**2.0mm Flat**	T 5206
1.3mm Flat	T 5202	**#0 Phillips**	T 5208
1.8mm Flat	T 5204		

$7.75 ea



150mm Vernier Callipers

These well finished 150mm vernier callipers provide Inside, Outside, Step, and Depth measurements, with scale resolution of 0.05mm or 1/128". Made from very strong polyamide material, they provide both imperial and metric measurements.

T 4948

$19.95

Vacuum Accessory Kit

A handy collection of attachments to convert a domestic vacuum cleaner into a powerful micro VAC for cleaning of computers and peripherals, typewriters, and other home office equipment.

T 1710

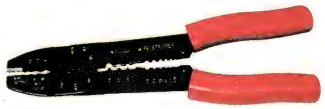
$14.95

Rotary Coax Stripper

This tool will strip both the outer jacket and inner insulation of your coax in one easy operation. Suits common RG-58/59/62 and RG-6 coax cables. Comes with an Allen key for blade cutting depth adjustment.

T 3640

$24.95



Crimping Tool

This economical, lightweight crimper can strip various wire sizes from 0.75mm to 6mm, and crimp your lugs or connectors quickly and reliably.

T 3525

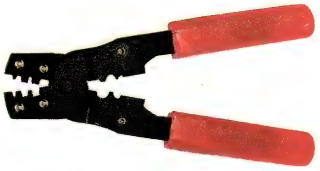
$12.95

Phone Line Crimping Tool

Cuts, strips and crimps modular style telephone line cords. Suits 4-pin and 6-pin modular plugs.

T 2591

$14.95



Lug Crimping Tool

A handy tool when you're working with non-insulated terminals. Has strong metal jaws and cable cutter, plus handles 10-28AWG wire.

T 3528

$17.95

Crimping Pliers and Terminal set

Strong crimping pliers with 150pcs of various size cord end terminals for joining wires. Terminals cover 0.5mm² to 2.5mm² cables.

T 3526

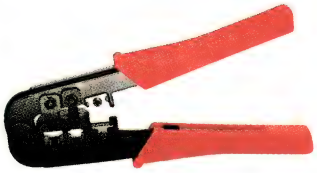
$22.50

6-Pin Phone Line Crimp Tool

All metal construction for longer life, with comfortable plastic coated handles. Cuts, strips and crimps modular style telephone line cords. Suits 6P6C, 6P4C and 6P2C connectors.

T 2916

$29.95



6/8 Pin Modular Crimp Tool

Cuts and strips cables, and crimps various 6pin and 8pin modular connectors including 6P4C (RJ-11), 6P6C (RJ-12), and 8P (RJ-45) varieties. Rugged metal construction for accurate crimps.

T 2920

$39.95

Ratchet Coaxial Crimping Tool

Perfect for many F, BNC, TNC, N, Teflon, Thinnet PVC and Fibre-Optic Connectors. Has an accurate ratchet drive and double jaws for single-action crimping. Heavy duty metal construction for reliable operation.

T 3537

$57.75

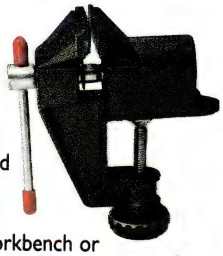
Professional Lug Crimping Tool

This robust crimper has a ratchet drive for accurate control, variable pressure adjustment and double jaws for single action crimping. Suits a wide variety of common insulated lugs.

T 3535

$59.95

Hobby Mini Vice



Sturdy, lightweight, portable and incredibly handy, it fits easily to workbench or table (anything up to about 25mm thick). Made from die-cast aluminium alloy for strength and durability, with jaws that are 60mm wide and open to 50mm.

T 4747

$15.95

Multi-Angle Metal Vice

Beautifully crafted metal vice suitable for a variety of hobby uses. It mounts to a bench up to 50mm thick, has jaws with rubber covers 75mm wide that open apart up to 55mm. Made from diecast aluminium alloy.

T 4742

$43.75

Quality 3" Swivel Vice

A very high quality mini vice that can be bolted or suction-fixed to the benchtop. It's made from high-quality cast alloy and has steel jaws with removable rubber pads. The ingenious swivel action allows you to mount it in almost any position.

T 4745

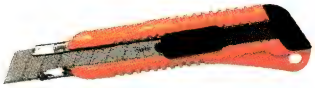
$56.95

Pana Vise Jr PCB Vice

You'll find this vice handy when both hands are tied up working with PCBs. It holds the board firmly between adjustable tough plastic clamps, while the head assembly can be rotated and tilted. Strong diecast base. Can be screwed to a work-bench. Made in USA.

T 4740

$49.95



Utility Knife

You'll never have to put up with blunt blades again. This handy knife contains a snap-off replaceable blade and comes with a safety blade lock plus a comfortably-sized grip for accurate work. T 3615

Replacement Blades

Pack of 10 T 3616 **$3.95**

$5.95

Aluminium Frame Utility knife

This solidly built aluminium frame utility knife is great for hobby work as it contains a retractable knife blade as well as a hacksaw blade.

T 3605

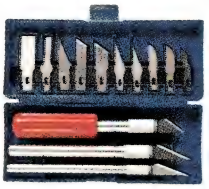
$9.95

Magnetic Tool Holder

Never lose your tools again. This magnetic tool storage bar is ideal for the workshop, garage or even for the kitchen knives. It holds small metal tools against the wall for easy storage. The 50cm strip simply screws to the wall.

T 5505

$9.95



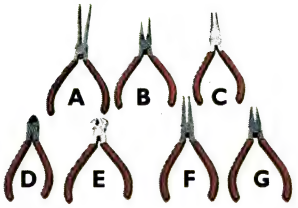
Precision Knife Set

This 13-piece precision knife set comes with three quality (varying size) knife handles and 10 spare blades in a variety of shapes and sizes. Comes in a handy plastic storage case. T 3618

Replacement Blade set

T 3619 **$5.95**

$16.95

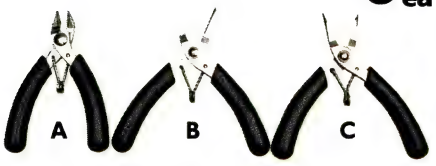


Spring Loaded Pliers/Nippers

General purpose hand-tools to help make work easier! Specially selected for project work, they're all high carbon steel, drop forged, hardened and tempered with insulated handles.

A	153mm Needle Nose	T 3293	
B	127mm Long Nose	T 3290	
C	125mm Bent Nose	T 3297	
D	115mm Diagonal Nipper	T 3291	
E	115mm End Nipper	T 3298	
F	125mm Flat Nose	T 3296	
G	115mm Long Nose	T 3292	

$8.50 ea



Stainless-Steel Mini Pliers/Cutters

Precision stainless-steel pliers and nipper for working with small components and general printed circuit boards. Features quality stainless-steel construction, are spring loaded, and have well-insulated handles.

A	90mm Diagonal Nipper	T 3310
B	100mm Round Nose Plier	T 3312
C	105mm Flat Nose Plier	T 3311

$13.95 ea

Transistor Mini Nippers

Ideal for PCB work! Japanese-made stainless steel construction with insulated easy-grip handles. Spring loaded, standard angle blades allow completely flush cutting edge. 5mm opening x 8mm super-sharp blade.

T 3205

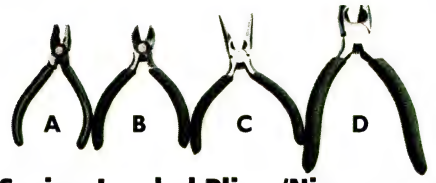
$29.95

Micro-Precision Plier Set

A superbly built set of spring-loaded micro pliers/nippers with fully insulated handles. Made from quality stainless steel and come with; 90mm cutting nippers, 100mm flat nose, 100mm round nose, 100mm bent nose and 100mm long nose pliers.

T 3575

$29.95



Spring-Loaded Pliers/Nippers

High quality tools for the electronics enthusiast. These spring-loaded plier/nippers use a specially heat-treated steel for excellent cutting capacity and durability and have comfortable handle insulation for easy long-term operation.

A	110mm Mini Combination Plier	T 3302	**$9.95ea**
B	120mm Diagonal Nipper	T 3300	**$9.95ea**
C	135mm Long-nose Plier	T 3301	**$9.95ea**
D	165mm Lge. Combination Plier	T 3303	**$10.95ea**

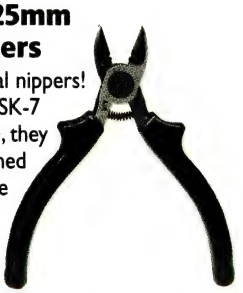
Pocket Workshop Pliers

An incredibly handy tool to have clipped to your belt. It unfolds into strong pliers, plus has a range of fold out attachments such as a knife, screwdrivers, bottle opener and file. Supplied with a leather storage case.

T 3308

$24.50

Heavy-Duty 125mm Diagonal Nippers



Our very best diagonal nippers! High quality Japanese SK-7 drop forged tool steel, they feature precision finished cutting edges that have been high frequency treated for a high Rockwell hardness of HRC60 for very long life. A recessed coil spring and thick moulded handles provide comfortable operation, with a wire stripping hole in the cutting blades for convenience.

T 3315

$29.95

5-Piece Pliers Set

All are drop forged, high carbon steel. With 127mm needle nose, 127mm bent nose, 127mm flat nose, 115mm diagonal cutter and 115mm end cut pliers in a handy plastic pouch.

T 3295

$29.95

Copper Wire Cutters

Ideal for cutting multi-strand copper cables typically used in vehicles and solar powered installations. Suits our W 2302 through W 2308 OFC DC cables.

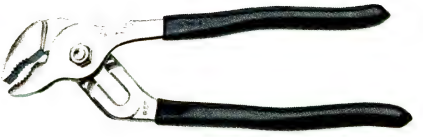
Medium	T 3320	**$10.95**
Large	T 3322	**$18.95**

Cable Tie Gun

The convenient way to tighten plastic cable ties. Has rigid plastic body, pistol grip action, and adjustable tension control for cutting off the unused tie end.

T 3720

$19.95



Groove Joint Pliers

Quality chrome-plated 190mm groove joint pliers, drop forged from tool steel, plus hardened and tempered for long life. Adjustable into 5 positions, they use a tongue-groove joint to ensure the handle won't slip between settings when under load. Insulated handles. Made in Japan.

T 3317

$16.95

Heavy-Duty Pliers

Solidly built all-purpose 200mm pliers for heavy-duty applications! Made from strong Chrome-Vanadium steel, these pliers have large semi-insulated handles for greater leverage, an in-built wire stripper covering 5 wire sizes, a wire cutter, small bolt cutter for soft steel bolts, as well as a lug crimper.

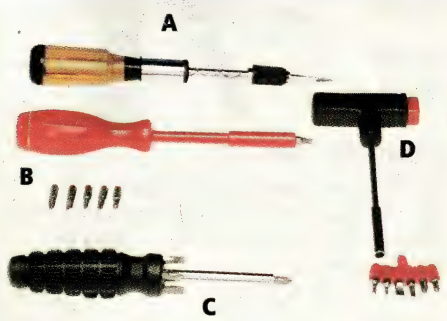
T 3305

$19.50

Quality Crescent Screwdrivers

A screwdriver for every job! Each one has precision-ground sand blasted tips for greater accuracy. Plus, they're made of rust-resistant tempered chrome-vanadium steel alloy and have moulded full-size oil and solvent-resistant handles.

Size	Description	Cat No.	Price
6 x 40mm	Flat stubby	T 6300	$4.95
3 x 75mm	Flat screwdriver with pocket clip	T 6302	$3.95
4 x 100mm	Flat blade	T 6304	$3.95
5 x 100mm	Flat blade	T 6306	$4.95
6 x 150mm	Flat blade	T 6308	$6.95
5 x 150mm	Insulated flat blade	T 6310	$5.95
40mm	Phillips stubby #2	T 6312	$7.95
75mm	Phillips #0	T 6314	$3.95
100mm	Phillips #1	T 6316	$6.95
150mm	Phillips #2	T 6318	$8.95



A. Push-Action

Makes fixing or removing screws easy! With clockwise, anti-clockwise and fixed direction selection. 6mm and 4mm flat heads, No's 1 and 2 Phillips and two-hole reamers (2mm and 2.8mm). Bits store in the handle.
T 4512 **$6.95**

B. Magnetic Screwdriver Set

A fully insulated, magnetic-head screwdriver set with six bits that store in the handle. With 4.5mm and 6mm flat blades, No's 1 and 2 Phillips head and No's 1 and 2 Pozidrive.
T 4505 **$7.95**

C. 5-Bit Screwdriver

Large rubber handle for added grip! With flat blades (1.2mm x 6, 6.5 and 7mm) and Phillips heads No's 1 and 2. Bits fit into handle. Made from quality chrome-vanadium steel.
T 4500 **$6.95**

D. T-Bar Magnetic

Made from chrome-vanadium steel with a T-bar handle for good grip. Comes with six magnetic bits – 2 Phillips, 2 flat blades and 2 Torx bits. Bits are stored in plastic holder.
T4515 **$6.95**

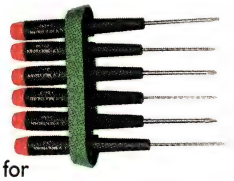
Neon Test Screwdriver

A must when you're working around live 240V mains conductors. Flat-bladed insulated screwdriver fitted with a neon indicator that operates from about 90V (AC or DC). With convenient pocket clip. Made in Germany.
T 4005 **$7.50**

Electronics Screwdriver Set

Especially long, very fine screwdrivers that are ideal for getting into those tight spots you often find while working with electronics. With 6 screwdrivers including Phillips head: 2.5 x 75mm, 3 x 100mm, 3 x 150mm. Flat Blade: 2.5 x 75mm, 3 x 100mm, 3 x 150mm.
T 3540 **$13.75**

6-Piece Electronics Screwdriver Set with Stand



Six screwdrivers and a handy stand. The set comprises of 140mm long extra-fine screwdrivers with free-running heads and specially-hardened tips for years of service. With flat blades; 1.5 x 50mm, 2 x 50mm, 2.5 x 50mm and 3 x 50mm. Phillips head; No's 00 x 50mm and 0 x 50mm.
T 3510 **$12.95**

Eye Glass Repair Kit

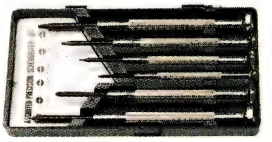
Helps with repair, adjustment or tightening of many spectacle frames. Includes hinge screws (2 sizes), mini screwdriver, nosepads, head-hugger hinge rings, all in a pocket size carry case.
T 4596 **$2.95**

Mini Screwdrivers

They're tiny! Just the thing for models, turntable cartridges etc. Approximately 30mm long shaft. Made in Japan.

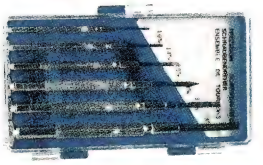
Flat Blade:	T 6010	$1.95
Phillips:	T 6015	$1.95

Precision Screwdriver Set



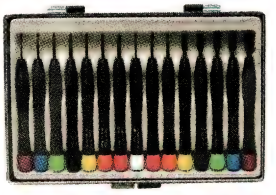
A well-made set with both Phillips and flat-head screwdrivers. Each has a free-running top and they're presented in a handy plastic storage box with a transparent lid for easy identification. Contains – Phillips head: 2.4 & 3mm. Flat Blade: 0.9mm, 1.2mm, 1.8mm & 3.5mm.
T 4360 **$5.95**

High Quality Precision Screwdriver Set

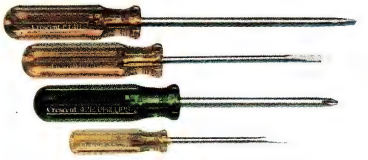


A flat-blade screwdriver set with blades made of Nickel Chrome Molybdenum alloy steel for greater strength. Supplied in a convenient plastic storage case. Blade sizes of 1.0mm, 1.4mm, 2.0mm, 2.4mm, 3.0mm and 3.8mm.
T 4364 **$8.50**

15-Piece Screwdriver Set



A handy collection of small screwdrivers for the electronics enthusiast. Includes 4 flat-blade drivers (1.4, 1.8, 2.4, 3.0mm), 3 Phillips heads (No's 00, 0, 1), 3 hex bar drivers (1.5, 2.0, 2.5mm) and 5 Hex nut drivers (3.0, 3.5, 4.0, 4.5, 5.0mm). Complete with plastic storage case.
T 4370 **$17.95**



Crescent Screwdriver Set

Pack of four quality screwdrivers with precision-ground sand blasted tips. All boast rust-resistant tempered chrome-vanadium steel alloy and moulded full-size oil and solvent resistant handles. *Limited stock.*
T 6130 **$22.95**

7-Piece Security Torx Screwdriver Set

Emergency kit for computer and appliance servicing. This pocket sized set provides 6 bits and an adaptor which acts as the handle of a screwdriver. Bit sizes are T10, T15, T20, T25, T30, T40.

T 4504

$7.95

10-Piece Bit Set & Right Angle Driver

Durable and great value. Supplied with 10 bits. Includes flat, Philips, Torx, and Pozidrive bits.

T 4507

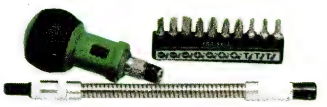
$10.95

6pc Socket Set & Right Angle Driver

A choice of 6 sockets with a right angled driver. Includes 6, 7, 8, 9, 10, 11mm sockets

T 4509

$14.95



10-Piece Bit Set And Flexible Shaft

Featuring a range of 10 quality bits, with a flexible shaft to reach places others can't.

T 4508

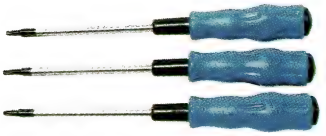
$15.95

Torx Screwdriver Set

A handy set of 3 small Torx screwdrivers with swivel-headed caps, and tough nickel chrome molybdenum steel shafts plus black oxided tips for greater durability. Sizes T6, T8, T10.

T 6138

$12.75

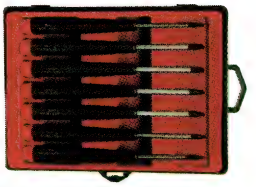


Security Torx Screwdriver Set

Medium sized security Torx screwdrivers with strong shafts, easy-to-grip moulded handles and black oxided tips. Sizes T8, T10, and T15.

T 6139

$14.95

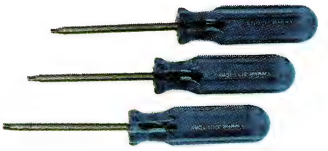


7-Piece Torx Screwdriver Set

A set of 7 Torx screwdrivers with strong 50mm alloy shafts and black oxided tips, all in a convenient plastic storage case. Sizes T6, T7, T8, T9, T10, T15, T20.

T 6140

$19.95

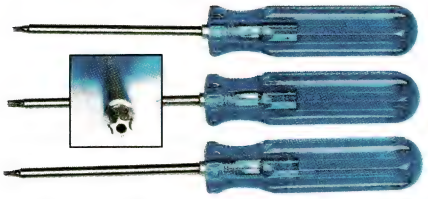


3-Piece Torx Screwdriver Set

Quality Crescent brand Torx screwdrivers with long shafts and large handles for greater leverage. Suitable for computer and appliance servicing, or wherever larger Torx screws are typically used. Sizes T10, T15, T20.

T 6132

$29.95



Security Torx Screwdrivers

Quality screwdrivers with large handles to suit the growing number of devices that use security Torx screws, including computer power supplies, fax machines, and power tools. Made in Australia. *Limited stocks.*

Size	Cat No.
T8	T 6134
T10	T 6135
T15	T 6136

$16.95 ea

Electrician's Screwdriver Set

With Neon Tester!

Insulated to 1000 volts! This 8-piece screwdriver set includes a neon tester making it ideal for electricians or anyone working with high voltages. It contains: Flat Blade: 6 x 150mm, 5 x 125mm, 4 x 100mm, 4 x 95mm and 2.5 x 75mm, plus Philips head (Numbers 0, 1 & 2).

T 4390

$19.95

Holding Screwdriver Set

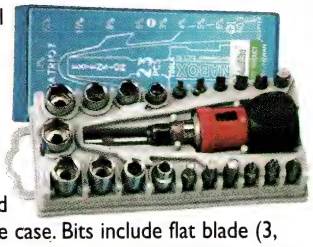
Fully-Insulated!

High-quality 5-piece screwdriver set that's fully insulated from handle to shaft end. The specially designed head 'holds' the screws so you don't drop them into awkward places. With 3 flat blades; 5 x 150mm, 4 x 125mm, 3 x 125mm, and two Philips head (Numbers 1 and 2).

T 4395

$24.95

20pc Bit Set and Ratchet Driver



A great general purpose tool kit. Consists of a ratchet driver handle, magnetised bit holder, 20 various bits and a handy storage case. Bits include flat blade (3, 4, 5, 6mm), Philips (No 4, 5, 6), Hex (No's 4, 5, 6), 1/4" shaft adaptor and Hex nut sockets (5, 6, 7, 8, 9, 10, 11, 12, 13mm).

T 4502

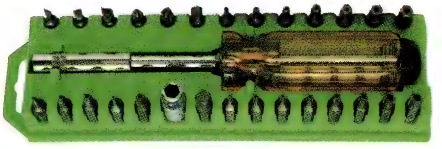
$19.75

32pc Security Bit Set

An incredibly handy bit set for use with equipment using security screws. Bits include Torx set bits (No's 6, 8, 10), security Hex bits (2, 2.5, 3, 4, 5, 6mm), Tri-wing bits (No's 1, 2, 3, 4), security Hex bits (5/64, 3/32, 7/64, 1/8, 9/64, 5/32"), spanner pin drive bits (4, 6, 8, 10mm) and a magnetised bit holder. All in a soft plastic case.

T 4506

$16.95

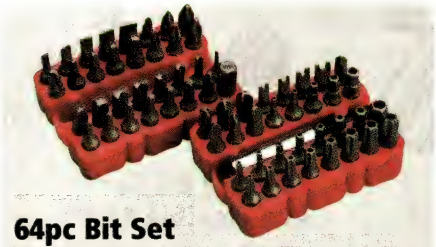


Driver and 28-Piece Bit Set

Consists of a strong driver handle with magnetised tip, 28 various bits and a handy storage case. Bit include flatblade (3, 4, 5mm), Philips heads (No's. 1, 2, 3), Hex (No's 2, 2.5, 3, 4, 5, 5.5, 6), Square (S0, S1, S2, S3), Security Torx (T7, T8, T9, T10, T15, T20, T25, T30, T40), as well as a 1/4" adaptor and hex nut socket.

T 4503

$26.95



64pc Bit Set

This 64-piece bit set is packed in two soft plastic storage cases for ease of carrying. Includes a magnetic bit holder. Each set contains:

- Security Torx bits – no. 8, 10, 15, 20, 25, 27, 30, 35, 40
- Hex bits – 5/64, 3/32, 7/64, 1/8, 9/64, 5/32"
- Tri-wing bits – numbers 1, 2, 3, 4
- Spanner bits – no.4, 6, 8, 10
- Hex bits – no.2, 2.5, 3, 4, 5, 6
- Slotted bits – 3, 4, 5, 6, 7mm
- Pozidrive bits – PZ0, PZ1, PZ2, PZ3
- Square bits – S1, S2, S3, S4
- Philips bits – no. 0, 1, 2, 2 drywall, 3, 4
- Clutch bits – 1/8, 5/32, 3/16, 7/32, 1/4"
- Torx bits – no. 6, 7, 8, 9, 10, 15, 20
- Hex to Square adaptor.

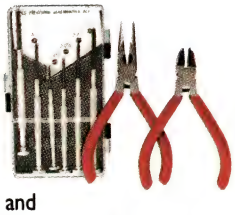
T 4501 **$26.95**

Keyless Chuck

This snap-out keyless chuck can be used with various cordless screw-drivers that normally take a Hex screw-driver bit. Can also be used for PCB drills (down to approx 0.5mm) that are normally too small for a standard drill chuck.

T 4743 **$8.75**

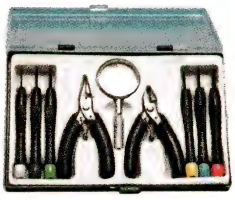
8-Piece Hobby Tool Kit



Bargain priced, this kit comes with 6 jeweller's screwdrivers (0.9, 1.2, 1.8, 2.4, 3 & 3.2mm flat head), quality 120mm long-nose pliers and 110mm side-cutters. The pliers are hardened and tempered with insulated handles.

T 3294 **$18.95**

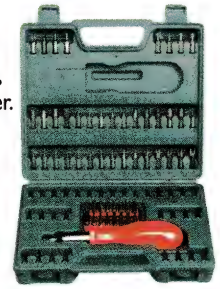
9-Piece Hobby Tool Kit



A great way to start building your tool collection. Includes 3 flat-blade screwdrivers (1.4, 1.8, and 2.4mm tips), 3 Philips head screwdrivers (no's 00, 0 and 1), stainless-steel side cutters and medium-nose pliers, and a 38mm magnifying glass, all in a handy storage case.

T 4605 **$29.95**

101pc Bit Set



Includes a hard plastic carry case, driver handle, and magnetised bit holder.

- Flat blade – 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16"
- Philips – #0, 1, 2, 2 Drywall, 3, 4
- Square – S0, S1, S2, S3
- Torx – 5, 5.5, 6, 7, 8, 9, 10, 15, 20, 25, 27, 30, 35, 40, 45, 50
- Pozidrive – #0, 1, 2, 3, 4
- Hex (SAE) – 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16"
- Hex (mm) – 1.5, 2, 2.5, 3, 4, 5, 5.5, 6, 7, 8mm
- Clutch – 1/8, 5/32, 3/16, 1/4, 7/32"
- Security Torx – 8, 10, 15, 20, 25, 27, 30, 35, 40
- Security Hex (SAE) – 5/32, 9/64, 1/8, 7/64, 3/32, 5/64"
- Security Hex (mm) – 2, 2.5, 3, 4, 5, 6mm
- Tri-wing – 1, 2, 3, 4
- Spanner – 4, 6, 8, 10mm
- Torque – 6, 8, 10mm

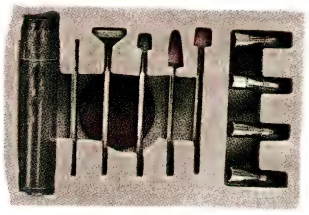
T 4513 **$36.80**

Hobby Super Drill Set

Excellent value for the hobbyist in search of a lightweight package for drilling, engraving, routing, shaping, sanding or milling. The main body features a strong 12V DC motor plus quick change chuck for easy attachment of various size bits. A number of accessories are also supplied as standard, including 5 high speed drill bits, 5 brass collets (for 0.5, 1.0, 1.5, 2.4 and 3.0mm bits), 4 grindstones with arbour, 1 thin grinding wheel and a 240V mains adaptor. Complete with plastic storage case. No load motor speed 12,000RPM, stall torque 530gcm^{-1}.

1 YEAR WARRANTY

T 4761 **$59.50**



Accessories Kits

12pc drills, 4pc collets, 4pc grindstones, 1 pc grinding wheel

T 4774 **$27.50**

12pc High Speed Drill Bit Set (0.5, 0.8, 1.0, 1.2, 1.5mm)

T 4775 **$13.75**

10-Piece Mini Spanner Set

A handy set of quality metric spanners covering most sizes between 4mm and 11mm. For light/medium duty uses.

T 4550 **$18.50**

5pc Reversible Ratchet Wrench Set

A set of handy offset box-end wrenches that provide reversible end travel through a simple lever adjustment. Sizes covered are 5.5, 6, 7, 8, 10, 11, 12, 13, 14, and 17mm.

T 4560 **$26.95**

Easy Etch Engraver

Protect and identify your property! Quickly and easily mark tools, stereo equipment and household valuables with a permanent identification or serial number. Complete with AC plug pack and long cord.

T 4753 ARLEC **$46.95**

Arlec Super Tool

Great for sanding, polishing, drilling, engraving, milling and more! Includes everything you need: wire brush, milling cutters, grinding wheel, high speed drills, chuck collets, eraser sticks and mains plug pack adaptor. Complete with carry case.

T 4754 ARLEC **$89.95**

Super Tool Accessories

4pc Drill Bit Kit	T 4756	$16.95
3pc Grindstone Kit	T 4758	$28.50
3pc Engrave/Mill Kit	T 4764	$17.75
6pc Slitting Saw Kit	T 4766	$27.95
3pc Wire Brush Kit	T 4768	$29.95
1pc Diamond Bit Engraving Kit	T 4769	$29.95

Handy 4-Blade Scraper

Great Value!

Features a chrome vanadium blade with four surfaces on it for deburring and counter-sinking holes as well as general finishing work. It'll help you give your project's front panel or chassis a professional finish.

T 3625

$4.95

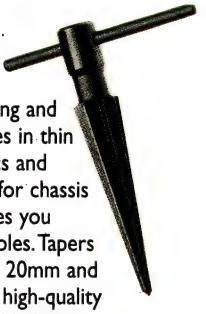
Countersink Tool

Makes countersinking screws easy! Simply drill the hole, insert the countersink tool and turn it. It's got a hardened blade for a long, trouble-free life.

T 4925

$6.75

Tapered Reamer



The perfect tool for shaping and enlarging holes in thin metals, plastics and wood. Great for chassis bashers – gives you exact-sized holes. Tapers from 4mm to 20mm and is made from high-quality treated steel. Made in Japan.

T 4920

$19.95

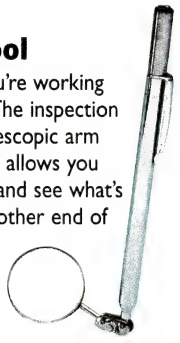
Nibbling Tool

Allows you to cut almost any shape or size of hole in sheet steel to 0.6mm thick or light alloy to 1.5mm thick. It follows curved or straight lines with ease and is also great for many plastics.

T 4945

$21.95

Mirror & Pick-Up Tool



Great when you're working in tight places. The inspection mirror with telescopic arm and swivel head allows you to get in there and see what's happening. The other end of the telescopic arm doubles as a magnetic pick-up tool.

T 4525

$7.95

Pearl Catch

A handy tool for picking up small components or hardware items from hard to reach areas (eg. the bottom of a completed project). Uses 4 springy splines to hold an item. All metal construction.

T 5117

$5.75

Needle File Set

A 5-piece set of short blade needle files for use in restricted spaces. Comes with flat, square, round, domed, and triangular files.

T 3225

$13.50

Needle File Set

A set of five needle files with a great selection of shapes for just about any job. The 90mm insulated handles allow you to get a good grip, while the 75mm blades give you plenty of length. Comes in a handy plastic storage pouch.

T 3230

$18.95

Round Magnifying Glass

A handy 63mm diameter magnifying glass with 2.5x magnification and a quality glass lens. Great for checking values on small components such as resistors.

T 4590

$7.95

Magnifier with Clip

Hold small components easily while you view them! Consists of a 36mm magnifying glass with 4X magnification glass lens and stainless steel tweezers hinged on the end of the magnifying glass handle.

T 4591

$9.95

Pocket Magnifier

Ideal for checking surface mount components, cracks in PCB tracks, or the quality of solder joints, this well-made pocket magnifier with 15mm diameter glass lens provides 10X magnification, and slides back into its plated brass case for protection after use.

T 4595

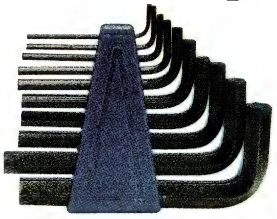
$18.95

Illuminated Pocket Magnifier

Great for checking components, PCBs, and other items where a magnified view is required. Features a large 26mm glass lens, 10 x magnification, carry pouch, and a pre-focussed globe to provide lighting of the viewed item. Requires 2 x 'AA' batteries.

T 4597

$26.50



10-Piece Allen Key Set

A handy metric Allen key set that comes complete with a plastic clip to help keep them together and organised. Contains 1.5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm, 5.5mm, 6mm, 8mm & 10mm Allen keys.

T 3545

$4.95

Allen Key Set

This set is a must if working on European and Japanese equipment that uses Allen screws. The seven gunmetal-finished Allen keys come in a plastic wallet in sizes 0.89mm, 1.27mm, 1.5mm, 2mm, 2.5mm, 3mm and 4mm. Made in Japan.

T 5080

$6.95

Pin Vice

A quality pin vice complete with 2 internal collars covering the 0 to 3.2mm diameter range. It's free-running head makes it ideal for use where hand drilling of delicate PCBs or cases is required. Drill bits not supplied. All metal construction.

T 5115

$13.75

IC Pin Straightener

Simply slip the IC into the slot and squeeze to straighten the pins. Accepts 8 to 20-pin narrow and 24 to 48-pin wide ICs. A ground connection point is provided to prevent static build-up.

T 4535

$9.95

16-piece Computer Servicing Kit

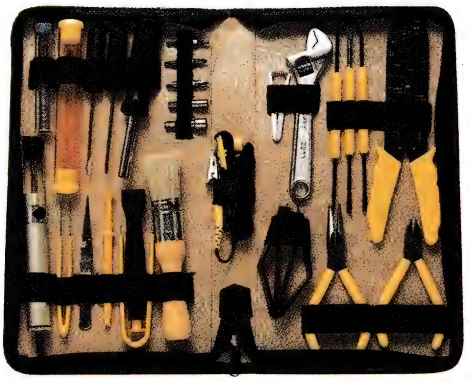
No computer enthusiast or electronic hobbyist should be without one. The tools come in an attractive zippered case.

It contains:

• Pearl catch • IC extractor • Wire cutters • Driver handle • 1/4" hex driver • PLCC extractor • 3/16" hex driver • Component tube • Long-nose pliers • Insulated tweezers • IC inserter (14 & 16 pin) • Double-ended Torx bit (T-10/T-15) • Large flat-head screwdriver – 75 x 5mm • Small Philips-head screwdriver – No. 0 • Small flat-head screwdriver – 75 x 3mm • Large Philips-head screwdriver – No. 1

T 4843

$49.95



27-Piece Computer Servicing Kit

Everything a technician or computer serviceman needs. The tools come organised in an attractive zippered case.

• Pearl catch • 3/16" hex driver bit • IC extractor • Anti-static wrist strap • Wire cutters • Needle-nose tweezers • Crimping tool • IC inserter (14 & 16 Pin) • Driver handle • 150mm shifting spanner • Heat-Sink clip • Solder in dispenser tube • PLCC extractor • Small insulated tweezers • Cleaning brush • Small flat-head screwdriver • Long-nose pliers • Small Philips-head screwdriver • Component tube • Double-ended Torx bit (T-10/T-15) • Soldering aid set • 1/4" Flat/No. 2 Philips screwdriver bit • Desoldering pump • 3/16" Flat/No. 1 Philips screwdriver bit • 1/4" Hex driver bit

T 4852

$98.50

Adjustable Magnifier and Stand

The perfect way to magnify items when you need both hands free. Consists of a large 87mm magnifying glass attached to a flexible gooseneck. Includes heavy die-cast metal base.

T 4592

$27.50

Visor Magnifier

This lightweight visor simply slips onto your head and you flip it down once a magnified view is required. Has selectable 2.2X and 3.3X magnification.

T 4593

$29.95

8-Piece IC Insertion and Extraction Kit

You'll never damage ICs when removing or installing them! Contains 6 IC inserters for all the common DIL packages, plus DIL and square IC extractors. Includes zippered case.

T 4848

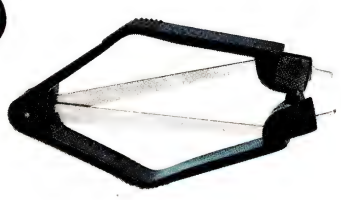
$48.50

IC Extraction Tool

Works with all DIL ICs and ensures no bent pins and no static damage. Operates like a pair of hooked tweezers. Metal construction with plastic coating.

T 4650

$3.25

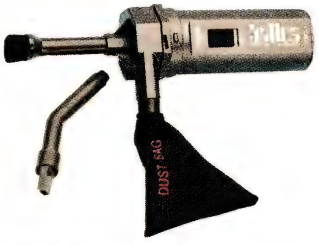


PLCC Extractor

Every computer tech needs one! The extractor makes the job of removing plastic-leaded chips and upgrading computer processors a breeze.

T 4655

$9.95



Mini Vacuum Cleaner

A lightweight hand-held vacuum that's ideal for cleaning dust and dirt from electrical equipment such as computers, stereos and cameras. Comes with brush attachment and collection bag.

T 1700

$26.50

Handheld Mini Vacuum Cleaner

Great for cleaning keyboards, Hi-Fi equipment & monitors. This Japanese unit's brush/tube head gently sweeps dust from the surface being cleaned before vacuuming it away. Requires 2 x 'AA' batteries.

T 1705

$32.95

Versatile Travel/Tool Bag

Your tools will remain in top shape when you carry them around in this versatile, zippered bag. Made of quality nylon with padding for extra protection, it comes complete with a strap for easy carrying.

T 4854 **$39.95**

Aluminium Frame Tool Case

Keep your precious equipment safe with this sturdy tool case, ideal for safely carrying sensitive test equipment, cameras, notebook computers, etc, as well as standard electronics tools. Padded internal dividers and removable tool holder are provided for easy partitioning of the storage space. Size: 320mm(L) x 230mm(W) x 150mm (H).

** Accessories/tools not included.*

T 4858 **$59.50**

Large Aluminium Frame Tool Case

A rugged, lockable serviceman's case with aluminium frame suitable for carrying sensitive test equipment, cameras, notebook computers, etc, as well as standard electronics tools. It's supplied with an internal removable tool holder, 5 adjustable padded dividers, and a shoulder carry strap. Size: 480mm(L) x 326mm(W) x 150mm(H).

** Accessories/tools not included.*

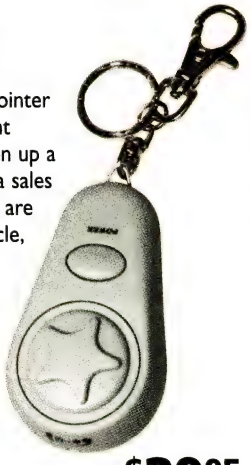
T 4856 **$69.50**

Keychain Miniature Laser Pointer

Amazing low price! Now you can keep a laser pointer in your pocket or clipped to your belt for those unexpected times when you have to point out something that's not within reach. Incredibly small, this 1mW laser pointer is contained in a tough metal housing just 9mm in diameter and approx 50mm long. Includes keychain with springclip for convenient storage. Powered by 3 watch style batteries (included).

T 2903 **$29.95**

Selectable Pattern Laser Pointer



A novel 1mW laser pointer for use where different symbols might brighten up a meeting or reinforce a sales presentation. Patterns are Dot, Star, I Luv U, Circle, and $ symbol. Up to 50m range indoors, with adjustable focus control. Powered by 3 watch style batteries (supplied).

T 2901 **$39.95**

Compact Laser Pointer

Simple to use and highly affordable, this compact laser pointer features a bright 1mW laser diode to indicate objects of interest up to 50m away (indoors). Great for use at meetings, product presentations, seminars and lectures as well as in retail and industrial display areas. Measures 125mm(L) x 25mm(W) x 15mm(H). Supplied with a handy carry strap and two 'AAA' batteries.

T 2902 **$49.95**

Ergonomic Laser Pointer

Need to point out detail on an out-of-reach object indoors? At the push of a button the Laserex LDP-400 will shine a small red dot on objects up to 50m away (indoors) through the use of a thin, low power laser beam. It comes in a stylish sculptured case that's easy to hold for long periods. Made in Australia, 3 year warranty. Requires 3 x 'N' size or 2 x 'AAA' size batteries. Specifications: Laser diode < 1mW max at 670nm +/-10nm. Complies with AS/NZS 2211:1997 (Class 2 laser product).

3 YEAR WARRANTY

T 2912 Laserex TECHNOLOGIES **$69.95**

Ultra-bright Laser Pointer

The Laserex LDP-300UB is a handheld laser pointer that features an 'ultra-bright' 1mW laser module with 635nM frequency providing up to 250 metres visible range indoors. Built for heavy-duty uses with a diecast internal frame covered by a tough polycarbonate shell. Uses either 2 x 'AAA' or 3 x 'N' size batteries. Made in Australia. **3 YEAR WARRANTY**

T 2909 Laserex TECHNOLOGIES **$99.95**

9 Range Multimeter

- Small & lightweight
- In-built diode & fuse protected
- Mirrored scale

Ranges:

DC V:	15, 150, 500V
AC V:	15, 150, 500V
DC Current:	150mA
Resistance:	x 1k
Battery Check:	1.5V

Q 1005

$19.80

12 Range Multimeter

- Safety recessed test lead connections
- In-built diode & fuse protected
- Mirrored scale
- Off position for meter protection

Ranges:

DC V:	15, 150, 500V
AC V:	15, 150, 500V
DC Current:	50mA, 250mA
Resistance:	x 10, x 1k
Battery Check:	1.5V, 9V

Q 1006

$25.50

19 Ranges Plus dB

- Diode and fuse protection
- Continuity checker
- 20k/Volt sensitivity
- Mirrored scale
- Adjustable carry handle/stand
- Recessed terminals for added safety

Ranges:

DC V:	2.5, 10, 50, 250, 1000V
AC V:	10, 50, 250, 1000V
DC (Current):	5mA, 50mA, 500mA & 10A
Resistance:	10k, 100k, 10Mohms
Battery test:	1.5V & 9V
dB:	-8dB to +62dB

Q 1025

$44.90

26 Range Analogue Multimeter

- Temperature range
- DC current range
- Transistor type or quality check indicator
- Continuity buzzer
- Built-in tilt stand
- Mirrored scale
- Temperature probe included

Ranges:

DC volts:	0.6, 3, 12, 60, 300, 1000V
AC volts:	12, 30, 120, 300, 1000V
DC current:	120µA, 3mA, 30mA, 300mA, 10A
Resistance:	5K, 500K, 5M, 50MΩ
Temperature:	-50°C to 260°C
Decibels:	-10dB to 62dB
Transistor check:	NPN or PNP type

Q 1007

$84

'Pocket-Sized' Multimeter

- 3.75 digit (3200 count) LCD
- Auto ranging
- Data hold
- Diode test
- Continuity test
- Analogue bar graph
- Auto power off
- Compact size – ideal for field work

Ranges:

DCV:	320mV, 3.2, 32, 320, 450V
ACV:	3.2, 32, 320, 450V
Resistance:	320, 3.2k, 32k, 320k, 3.2M, 32M ohm

Q 1577

12 MONTH WARRANTY

$49.90

Battery Tester

Tests Most Sizes

Save money and batteries with this compact and easy-to-use 15-range battery tester. In an instant you'll know whether a battery is fresh or flat. With an impact-resistant case, it can take the rough and tumble of just about any toolbox! It's self-powered so it never needs batteries.

Q 1001

$19

19 Range Multimeter

- 3.5 Digit (2000 Count) LCD
- Diode Test
- Transistor Test
- Low Battery Warning

Ranges:

DC V:	0.2, 2, 20, 200, 1000V
AC V:	200, 750V
DC A:	200µA, 2mA, 20mA, 200mA, 10A
Resistance:	200, 2k, 20k, 200k, 2M ohms

Q 1419 **12 MONTH WARRANTY**

$21.50

19 Range with Continuity

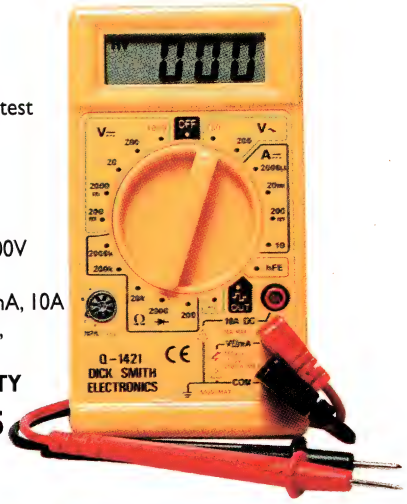
- 3.5 Digit (2000 Count) LCD
- Diode and audible continuity test
- Transistor test
- 50Hz square wave output
- Low battery warning

Ranges:

DCV:	0.2, 2, 20, 200, 1000V
ACV:	200, 750V
DCA:	2mA, 20mA, 200mA, 10A
Resistance:	200, 2k, 20k, 200k, 2M ohms

Q 1421 **12 MONTH WARRANTY**

$29.95



19 Range Digital Multimeter with Data Hold

NEW FOR '99

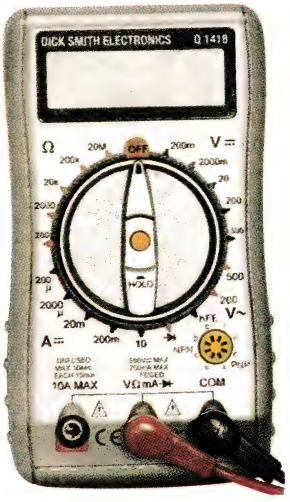
- 3.5 Digit LCD
- Continuity Buzzer
- Transistor and diode test
- Data hold button
- Low battery warning

Ranges:

DC volts:	200mV, 2000mV, 20V, 200V, 500V
AC volts:	200V, 500V
DC current:	200µA, 2000µA, 20mA, 200mA, 10A
Resistance:	200Ω, 2000Ω, 20kΩ, 200kΩ, 20MΩ,

Q 1418 **12 MONTH WARRANTY**

$27.50



19 Range Digital Multimeter with 50Hz Square Wave Output

NEW FOR '99

- 3.5 Digit LCD
- DC Current range
- 50Hz Square Wave output
- Continuity Buzzer
- Transistor and diode test
- Data hold button
- Low battery warning

Ranges:

DC volts:	200mV, 2000mV, 20V, 200V, 500V
AC volts:	200V, 500V
DC current:	2000µA, 20mA, 200mA, 10A
Resistance:	200Ω, 2000Ω, 20kΩ, 200kΩ, 20MΩ,

Q 1417 **12 MONTH WARRANTY**

$32

32 Range Multimeter

- 3.5 Digit (2000 count) LCD
- Diode and audible continuity test
- Transistor test
- 20A current range
- Low battery warning

Ranges:

DCV:	0.2, 2, 20, 200, 1000V
ACV:	0.2, 2, 20, 200, 750V
DCA:	20µA, 200µA, 2mA, 20mA, 200mA, 2A, 20A
ACA:	20µA, 200µA, 2mA, 20mA, 200mA, 2A, 20A
Resistance:	200, 2k, 20k, 200k, 2M, 20M ohms

Q 1427 **12 MONTH WARRANTY**

$49.70

23 Range Multimeter

- 3.75 digit (3200 count) LCD
- Diode test
- Audible continuity test
- Resistance
- Data hold
- Bar graph display

Ranges:

DCV:	320mV, 3.2, 32, 320, 600V
ACV:	3.2, 32, 320, 600V
DCA:	32mA, 320mA, 10A
ACA:	32mA, 320mA, 10A
Resistance:	320, 3.2k, 32k, 320k, 3.2M, 32M ohms

Q 1428
12 MONTH WARRANTY

$79.80

34 Range 3.5 Digit Multimeter

- 3.5 digit (2000 count) LCD
- Pop up LCD display for adjustable viewing angle
- Diode test
- Audible continuity test
- Transistor test
- Low battery warning

Ranges:

DC V:	200mV, 2, 20, 200, 1000V
AC V:	200mV, 2, 20, 200, 750V
DC A:	200µA, 2mA, 20mA, 200mA, 10A
AC A:	200µA, 2mA, 20mA, 200mA, 10A
Resistance:	200, 2k, 20k, 200k, 2M, 20M, 200M ohms
Capacitance:	2nF, 20nF, 200nF, 2µF, 20µF

Q 1429

$69

30 Range 3.5 Digit Multimeter

- Temperature Range
- 3.5 digit (2000 count) LCD
- Transistor test
- Diode test
- Audible continuity buzzer

Ranges:

DC V:	200mV, 2, 20, 200, 1000V
AC V:	2, 20, 200, 700V
DC A:	2mA, 20mA, 200mA, 20A
AC A:	200mA, 20A
Resistance:	200, 2k, 20k, 200k, 2M, 20M, 200M ohms
Capacitance:	2000pF, 20nF, 200nF, 2µF, 20µF
Temperature:	-40° to 1000°C (unit) -40° to 260° (probe)

Q 1447

$75

24 Range 3.5 Digit Multimeter

- 3.5 digit (2000 count)
- Max hold + data hold
- Diode & continuity test
- Mains rated suitable for 240V domestic mains measurements.
- Protective rubber holster

Ranges:

DC V:	2, 20, 200, 600V
AC V:	2, 20, 200, 600V
DC A:	200µA, 2mA, 20mA 200mA, 10A
AC A:	200µA, 2mA, 20mA, 200mA, 10A
Resistance:	200, 2k, 20k, 200k, 2M,20M ohm

Q 1563

$109

3.5 Digit Multimeter

- 3.5 digit (2000 count) LCD
- Capacitance test
- Transistor hFE test
- Diode and continuity test
- Low battery indicator
- Protective rubber holster

Ranges:

DCV:	200mV, 2V, 20V, 200V, 600V
ACV:	200mV, 2V, 20V, 200V, 600V
DC Current:	200µA, 2mA, 20mA, 200mA, 10A
Resistance:	200, 2k, 20k, 200k, 2M, 200M ohm
Capacitance:	2nF, 20nF, 200nF, 2µF, 20µF

Q 1426

$119.50

3999 Count Digital Multimeter

- Large 3.75 digit (3999 count) LCD
- Pop-out stand
- Auto-polarity
- Capacitor/diode/transistor test
- Logic circuit test
- Frequency measurement (up to 4MHz)
- Peak reading hold
- Continuity test
- Soft carry case and test leads

Ranges:

DCV:	400mV, 4V, 40V, 400V, 1000V
ACV:	400mV, 4V, 40V, 400V, 750V
DC Current:	40mA, 400mA, 10A
AC Current:	40mA, 400mA, 10A
Resistance:	400, 4k, 40k, 400k, 4M, 40M, 400M ohms
Trans. Check:	hFE(NPN/PNP)
Capacitance:	4nF, 40nF, 400nF, 4µF, 40µF
Freq. Measure:	Auto-ranging 4k-4MHz (4 scales)
Logic Measure:	TTL type

Q 1451

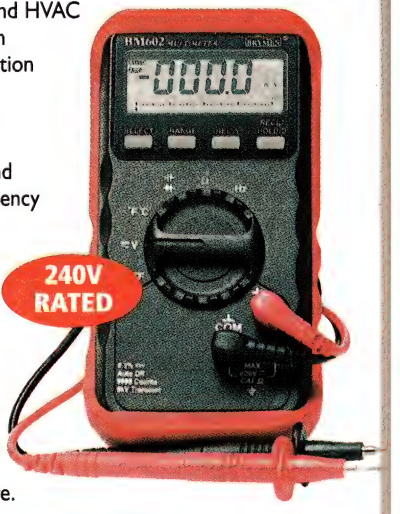
$129

Brymen Digital Multimeter

Designed especially for Industrial and HVAC applications with enhanced safety in accordance with IEC1010-1 installation category III for 600V.

- 4 digits 9999 Counts Resolution
- Data updates 4 times/second
- Bargraph updates 20 times/second
- 4 selectable sensitivities on frequency
- Record Max, Min, Max-Min, Avg
- Relative Zero, Data Hold
- Auto power off
- DCV 999.9mV to 600.0V
- ACV 999.9mV to 600.0V
- Resistance 999.9Ω to 40.00MΩ
- Temperature -20° C to 500° C
- Capacitance 1.000µF to 10.00mF
- Frequency 9.999Hz to 50.00kHz
- Fast audible continuity
- Diode test, splash proof and more.

Q 1566



BRYMEN®

$179

Clamp Meter

Features:
- 3.5 digit 1999 counts with high resolution
- ACA Current measurement up to 700 Amps
- Reading of PEAK, DATA HOLD function
- Diode test function
- 600VDC/600VAC overload protection in DCV, ACV ranges
- 600V overload protection in Diode, Ohm, Hz, Continuity

Ranges:

DC Volt:	600V ±0.5%
AC Volt:	200/600V ±1.2%
AC Current:	20A range (±1.5% 50Hz/60Hz), (±3.5% 40Hz/500Hz), 200A/700A ranges (±1.5% 50Hz/60Hz), (±3.5% 40Hz/500Hz)
Resistance:	2k/200kΩ ±1%
Frequency:	Auto-Ranging up to 20kHz ±0.1%
Continuity:	<100Ω

Q1475

$169

3.5 Digit LCR Multimeter

A highly reliable multimeter that accurately measures inductance, capacitance, resistance, voltage, logic and frequency. It features continuity, transistor and diode tests plus frequency and duty cycle. Additionally, it lets you know when your battery is running low as well as providing over-range indication. Sounds an input warning beeper and provides auto power-off for longer battery life. Comes complete with test leads and holster.

Ranges:

DCV:	200mV, 2V, 20V, 200V, 1000V
ACV:	200mV, 2V, 20V, 200V, 750V
AC/DC Current:	20mA, 200mA, 20A
Resistance (ohms):	200, 2k, 20k, 200k, 2M, 20M, 2000M
Capacitance:	2nF, 20nF, 200nF, 2μF, 200μF
Frequency (auto-ranging):	2kHz-20kHz
Inductance:	2mH, 20mH, 200mH, 2H, 20H

Q1559

$159

Multimeters & 240V AC Mains Measurements

The domestic mains supply is nominally only 240V AC, but momentary surge voltages well in excess of 1,000V can occur as a result of switching transients and lightning strikes. As they are usually rated at 1,000V or less, many DMMs are unsuitable for use in mains supply circuits and should be used only in circuits in which their maximum ratings are unlikely to be exceeded. Meters which are better suited to use in mains supply circuits include the Q1563 and Q1566 on page 178, Q1565 on this page and all Fluke models listed in this catalogue.

PC Interface & True RMS 3.5 Digit Multimeter

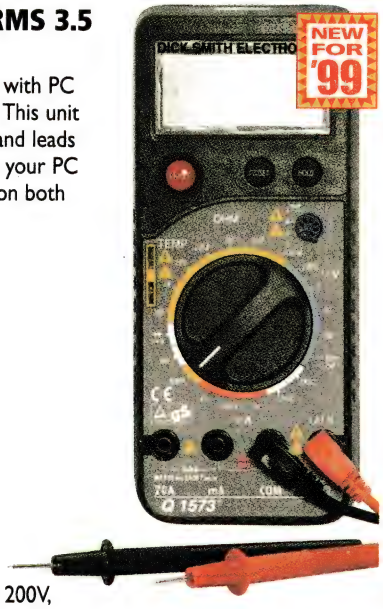
A high quality digital multimeter with PC interface and True RMS features. This unit comes complete with software and leads that allows you to hook it up to your PC for easy data transfer that runs on both MS-DOS and Windows.

Features:
- 3.5 Digit LCD
- Analogue bargraph
- MIN/MAX data hold
- Frequency
- 20A current range
- Alternating voltage or current
- Continuity/diode test
- Logic test
- HFE Transistor test
- Temperature function
- Low battery indicator

Ranges:

DC Volts:	200mV, 2V, 20V, 200V, 1000V
AC Volts:	200mV, 2V, 20V, 200V, 750V
DC Current:	2mA, 200mA, 20A
AC Current:	2mA, 200mA, 20A
Resistance:	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ, 2000MΩ
Frequency:	2KHz to 20MHz

Q 1573



$179

Brymen 3.75/4.75 Digit Multimeter

240V RATED

A high quality meter, designed with safety in mind. Fast 4,000 count digital display updates 5 times per second. 10 times high resolution 40,000 count display mode updates 1.25 times per second. Dual display mode allows you to simultaneously view frequency along with other functions.

Features:
- Diode Test
- Relative modes
- Conductance mode
- Hold and memory function
- Fast, audible continuity check
- Fast, analogue bar graph
- Superior AC noise rejection

Ranges:

DCV:	400mV, 4V, 40V, 400V, 1000V
ACV:	400mV, 4V, 40V, 400V, 750V
DCA:	4000uA, 400mA, 10A
ACA:	4000uA, 400mA, 10A
Resistance:	400, 4k, 40k, 400k, 4M, 40M
Conductance:	400nS
Frequency:	99.999Hz, 999.99Hz, 9.9999kHz, 99.999kHz, 250.00kHz
Capacitance:	4nF, 40nF, 400nF, 4μF, 40μF, 400μF, 4mF, 40mF

Q1565

$249

BRYMEN®

Scopemeters and Multimeters

FLUKE

Regarded by industry professionals as the most forgiving meters ever made!

Fluke 123 20MHz Industrial Scopemeter

Ideal for troubleshooting industrial machinery, instrumentation, control and power systems. Combining the three most frequently used service tools – scope, meter and recorder – in one handheld package, this rugged and dependable model offers Connect-and-View hands-off operation for checking an entire trouble shooting sequence without ever touching a button. Other important features include an easy-to-read, bright cold-cathode, fluorescent backlit screen, 26 commonly used measurements, 1.25 Gigasamples/second repetitive sampling and a four hour rechargeable battery pack. It also finds intermittent problems fast with Fluke's unique TrendPlot feature with date and time stamp. For extra versatility, this superb model connects to a PC or printer via optional interface cables.

Q 1644

3 YEAR WARRANTY **$2395**

EXCLUSIVE TO POWER HOUSE & direct link

Fluke 867B Graphical Multimeter

This indispensable and sophisticated tool combines powerful graphic displays with advanced multimeter functions. With a bright, high contrast screen for easy viewing from all angles, the Fluke 867B offers enhanced graphical features, including logic activity, component test and waveform capabilities. Other versatile features include 32,000 count resolution, basic DC accuracy of 0.025% and true RMS AC bandwidth to 300kHz. The Fluke 867B measures AC/DC voltage (320mV-1000V) and AC/DC current (320µA to 10A), as well as resistance, capacitance, dB and frequency. It is supplied with a battery eliminator/charger and NiCad battery pack.

Q 1642

3 YEAR WARRANTY **$1850**

EXCLUSIVE TO POWER HOUSE & direct link

Fluke 87 Series III Multimeter

Convenient and safe are the catch words for this meter. It features easy-to-read digital display with a 32 segment analogue pointer and backlit display with on/off controls for easy viewing in all light conditions, with an automatic touch hold for triggering the meter to capture stable non-zero readings. It meets IEC 61010 safety standards for CAT III 1000V and is protected from overvoltage transients to 8kV per IEC 61010-1. Includes 4000 count digital display, true RMS, continuity, min/max mode, peak min/max, diode test, sleep mode, touch hold and fused amps inputs, holster and leads.

Q 1710

LIMITED LIFETIME WARRANTY **$849**

EXCLUSIVE TO POWER HOUSE & direct link

Fluke 83 Series III Digital Multimeter

Features large, easy-to-read digital display with an analogue bargraph, backlit display with on/off controls for easy viewing in all light conditions, automatic touch hold automatically triggers the meter to capture stable non-zero readings freeing you to focus on the test probes. Meets IEC 61010 safety standards for CAT III 1000V. Protected from over-voltage transients to 8kV per IEC 61010-1. Has a 4000 count digital display, 43 segment bargraph analogue display, fused amps input, continuity, min/max mode, relative mode, diode test and 30-minute sleep mode.

DCV:	1000V Max, 0.1% accuracy
ACV:	1000V Max, 0.5% accuracy
DC & AC current:	10A
Resistance:	40MΩ, ±(0.4% + 1) accuracy

Q 1799

LIMITED LIFETIME WARRANTY **$699**

FLUKE Multimeters

The Fluke professional quality multimeters give you better value, better performance and more features for your dollar. All '70 Series III' meters have 'Touch Hold', diode test, continuity beeper, automatic self test, sleeper function and exceptionally long battery life as standard features.

Fluke 73 Series III Digital Multimeter

Extremely rugged overmolded case protects this meter which features a default autorange mode and an automatic touch-hold that triggers the meter to capture stable non-zero readings freeing you to focus on the test probes. It meets IEC 1010 safety standards for 600V CAT II applications. Protected from overvoltage transients to 4kV per IEC 1010-1. Features a continuity beeper, diode test, 3200 display counts, analogue bargraph, fused current inputs.

DCV:	600V max, 0.3% accuracy
ACV:	600V max, 2% accuracy
DC & AC current:	10A
Resistance:	32MΩ, 0.5% accuracy

Q 1703 **LIMITED LIFETIME WARRANTY**

$329

Fluke 75 Series III Digital Multimeter

New ergonomic styling fits in your hand perfectly, and a rugged overmolded case protects this meter. It features a default autorange mode and an automatic touch-hold that triggers the meter to capture stable non-zero readings freeing you to focus on the test probes. It has a large easy-to-read digital display and meets IEC 1010 safety standards for 600V CAT III. Protected from overvoltage transients to 6kV per IEC 1010-1. Features a continuity beeper, diode test, 3200 display counts, analogue bargraph, fused current inputs.

DCV:	600V max, 0.3% accuracy
ACV:	600V max, 2% accuracy
DC & AC current:	10A
Resistance:	32MΩ max, 0.5% accuracy

Q 1705 **LIMITED LIFETIME WARRANTY**

$395

EXCLUSIVE TO Power House & direct link

Fluke 77 Series III Digital Multimeter

Fits perfectly in your hand with new ergonomic styling and is protected by a rugged overmolded case. It features a default autorange mode and an automatic touch-hold that triggers the meter to capture stable non-zero readings freeing you to focus on the test probes. It has a large easy-to-read digital display and meets IEC 1010 safety standards for 600V CAT III and 1000V CAT II. Protected from overvoltage transients to 6kV per IEC 1010-1. Features a continuity beeper, diode test, 3200 display counts, analogue bargraph, fused current inputs.

DCV:	1000V max, 0.3% accuracy
ACV:	1000V max, 2% accuracy
DC & AC current:	10A
Resistance:	32MΩ max, 0.5% accuracy

Q 1707 **LIMITED LIFETIME WARRANTY**

$469

EXCLUSIVE TO Power House & direct link

Fluke 79 Series III Digital Multimeter

Features true RMS AC readings so you get the correct measurement even when harmonics are present. New ergonomic styling, protected by a rugged overmolded case. Features autorange mode and an automatic touch-hold that triggers the meter to capture stable non-zero readings freeing you to focus on the test probes. It has a large easy-to-read digital display and meets IEC 1010 safety standards for 600V CAT III and 1000V CAT II. Protected from overvoltage transients to 6kV per IEC 1010-1. Features a continuity beeper, diode test, 3200 display counts, analogue bargraph, fused current inputs, lead resistance compensation, Low ohms and TRMS.

DCV:	1000V max, 0.3% accuracy
ACV:	1000V max, 1.5% accuracy
DC & AC current:	10A
Resistance:	40MΩ max, 0.4% accuracy

Q 1709 **LIMITED LIFETIME WARRANTY**

$499

EXCLUSIVE TO Power House & direct link

Fluke 16 Digital Multimeter

Measures temperature quickly and accurately. Use to test motor start and run capacitors up to 10,000 uF or as a flame rod tester with measurements down to 0.1 uA. Meets the IEC 1010-1 1990-09 and ANSI/ISA-S82.01-94 for use in over-voltage category II locations. Features min/max recording with time stamp, auto ranging and high resistance ranges to 40M Ω, battery sleep mode, battery life 650 hours, 4000 count digital display. Includes 80PK-1 bead temperature probe, 80AK temperature adaptor, TL75 test leads and C10 holster.

DCV:	600V, 400V, 40V, 4V.
ACV:	600V, 400V, 40V, 4V.
AC/DC current:	200μA, 0.5% accuracy.
Ohms:	400Ω, 4 kΩ, 40 kΩ, 400 kΩ, 4 MΩ, 40 MΩ.
Capacitance:	1μF, 10μF, 100μF, 1000μF, 10,000μF.
Temperature:	-10 to 400°C, -40 to -10°C, 15 to 750°F, -40 to 15°F.

Q 1613 **3 YEAR WARRANTY**

$289

EXCLUSIVE TO Power House & direct link

Fluke 19 Digital Multimeter

Introducing a new affordable product with the features and accuracy found in more expensive multimeters. The Fluke 19 Digital multimeter offers Fluke's legendary reliability, safety and accuracy in a rugged, shock-absorbing overmolded case.

- Auto range
- Automatic touch hold
- Continuity beeper
- Duty cycle
- MIN/MAX record mode
- Stand by mode

DC volts:	0V to 1000V
DC current:	10A (20A for 30 seconds)
AC volts:	0mV to 1000V
AC current:	0 to 10A (20A for 30 seconds)
Ohms:	0 to 40MΩ
Conductance:	40 nS
Diode test:	3,000V
Capacitance:	1nF to 5uF
Frequency:	1Hz to 200kHz

Q 1719 **12 MONTH WARRANTY**

NEW FOR '99

$179

Some products on this page are not displayed in all stores, but may be ordered

Fluke T5-600 Electrical Tester

Check voltage, continuity and current with one compact tool: the Fluke T5 electrical tester. The tough leads stow neatly in the back of the tester, making it easy to carry the T5 in your tool box. Easy and accurate OpenJaw current measurement lets you check current up to 100A without breaking the circuit. Displays resistance to 1000 Ohm, has a continuity beeper.

Q 1628 FLUKE **$199**

Fluke 12 Multimeter

With a 3.75 digit (4000 count) display and a V-check which automatically changes modes. It also has continuity capture which records intermittent opens and shorts. The min/max record and time stamp lets you capture precisely what occurred and when.

Specifications:

DCV:	4000mV, 4V, 40V, 400V, 600V
ACV:	4000mV, 4V, 40V, 400V, 600V
Resistance:	400 ohm, 4k, 40k,400k,4M, 40M
Capacitance:	1µF, 10µF, 100µF, 1000µF, 10,000µF

Q 1612 **$245**

Fluke 18 Automotive Multimeter

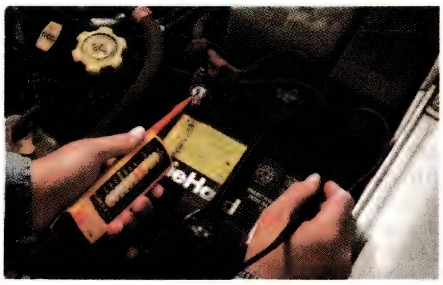
Records minimum and maximum voltages automatically, monitor voltage variations and catch glitches.

Specifications:

DC Volts:	Max input 600V, smallest resolution 1mV
AC Volts:	Max input 600V, smallest resolution 1mV
Ohms:	Max input 40Mohm, smallest resolution 0.1 ohm
Capacitance:	Max input 10000 mF, smallest resolution 0.001mF
Continuity:	Beeper sounds for contact <25ohms

Q 1636 **$279**

EXCLUSIVE TO POWER HOUSE & direct link

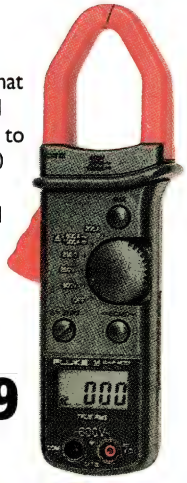


Fluke T2 Electrical Tester

This voltage and continuity tester is designed to work long and hard. There are no settings: just probe the circuit and the T2 electrical tester will show you whether you're looking at AC volts, DC volts or an open circuit. The LEDs indicate seven AC and DC nominal voltage levels, with DC voltages as low as 6V. It has a DC polarity indicator and it fits into an overall pocket. It is protected to 1000V input for use in CAT III environments.

Q 1627 FLUKE **$99**

Fluke 30 Clamp Meter



An accurate clamp meter that provides easy single-handed operation and measures up to 400A AC, 600V AC and 200 ohms. It also features a continuity tester and a hold function for when you need to hold the last reading on the display. Comes complete with soft carry case and test leads.

Q 1675 **$299**

EXCLUSIVE TO POWER HOUSE & direct link

Fluke High Voltage Probe

The safe and easy way to measure high voltages! With a division ratio of 1000:1 and 1000M Ohm input resistance, it measures up to 40kV or 28kV RMS AC.

Q 1690 **$319**

EXCLUSIVE TO POWER HOUSE & direct link

Fluke Accessories

We have available a wide range of test leads, alligator clips, holsters, hard protective cases and fuses for your Fluke multimeters.

Q 1660	Alligator Clips – AC70A	**$25**
Q 1662	Large Alligator Clips – AC85	**$34**
Q 1650	Right Angle Test Leads – TL75	**$29.95**
Q 1659	Industrial Test Clips – AC20	**$65**
Q 1661	Hook Test Clips – AC80	**$49**
Q 1671	Pin Grab Test Clips – AC83	**$49**
Q 1647	C50 Ruggedised Soft Case	**$49**
Q 1617	C90 Soft Case	**$49**
Q 1616	C12A Soft Case	**$49**
Q 1651	Flexible Test Leads – TL24	**$49**

**Some items not available in all stores but may be ordered.*

Fluke Fuses

Quality replacement fuses to suit the more popular Fluke multimeters

Suits	Description	Cat No.	Price
73,77	KTK15		
77&78	15A 600V	P 7884	**$19.95**
87	BBS–1		
	1A 600V	P 7882	**$9.95**
75&77	GDA–630		
	630mA 250V	P 7880	**$3.95**

Thermocouple Probe

- Measures a range from -40°C to 250°C (-40°F to 482°F)
- An ultra fast response naked bead thermocouple wire, suitable for many general purpose applications

Q 1439

$19.95

High Temperature Probe

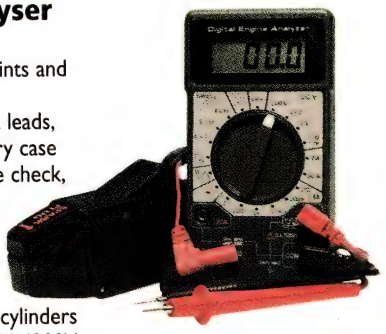
- Measures range from -50°C to 1200°C (-50°F to 2200°F)
- 10cm Tube, 8mm Diameter
- High Temperature, Penetration and Immersion Probe

Q 1438

$99.95

3.5 Digit Engine Analyser

- For DIY car maintenance
- Monitors RPM, dwell angle, points and battery charging system
- Includes inductive pick-up, test leads, alligator clip assembly and carry case
- Features 3.5 digit display, diode check, duty cycle and auto polarity



Specifications

Tach:	x10 RPM
DC current:	2A, 20A
Dwell:	4,5,6 and 8 cylinders
DC V:	200mV, 2V, 20V,200V
Resistance:	20, 200, 2K 20K, 200K, 2M

Q 1556

$99

Digital Stick Thermometer

- Compact, handheld digital thermometer with 3.5 digit LCD
- Holds current and maximum readings
- Includes K-Type thermocouple probe

Specifications

Unit Range:	-50°C to 1,300°C
Thermocouple Range:	-40° to 260°C
Resolution:	0.1°C or 1°C
Output:	1mV/1°C
Accuracy:	-50°C to 1,000°C: +/- (0.3% rdg + 1°C) 1,000°C to 1,300°C: +/-(0.5% rdg + 1°C) (for operating temperatures of 18°C to 28°C)
Probe Accuracy:	+/- 2.2°C or +/- 0.75% of reading

Q 1436

$99

Digital Light Meter

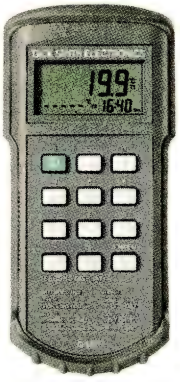
- Ideal for photography, dark room and video use
- Measures up to 50,000 lux over 3 ranges
- Features auto-zero function, low battery indicator and carry case
- Requires 1 x 9 volt battery for 150-200 hours continuous use

Q 1400

$139

Deluxe Dual Input Thermometer

- Compact, handheld dual input digital thermometer with 4.5 digit LCD
- Offers both Celsius and Fahrenheit readings
- Beeper sounds when preset temperature limits exceeded
- Records minimum/maximum temperatures and time
- Relative mode displays difference between reading and preset value
- K-Type thermocouple supplied
- Features auto power off, data hold, dual temperature and temperature differential displays



Unit Range:	-200° to 1,370°C
Thermocouple Range:	-40° to 260°C

Q 1437

$169

Electromagnetic Field Tester

- Suitable for monitoring environmental electromagnetic radiation
- Measures electromagnetic radiation generated by power lines, cables, computers, TVs, etc
- Easy-to-read 3.5 digit LCD display
- Quick and simple to use

Specifications

Max indication:	199.9
Range in gauss:	0.1m to 199.9m gauss
Band width:	30Hz to 300Hz +/- (4% + 3d) at 50Hz/60Hz
Sampling time:	0.4 seconds approx

Q 1225

$149

Infrared Thermometer

Measure temperature from a distance with this portable compact unit. It features a back lit display, auto hold and auto power off functions, a 3.5 digit LCD and low battery indicator.

NEW FOR '99

Temperature Range:	-20°C to 260°C
Display resolution:	1°C
Measurement rate:	2.5 times per second, nominal
Detection Element:	Thermopile
Optical lens:	Fresnal lens
Field of view:	65mm @ 1M
Response time:	1 second
Spectral response:	6 to 14um nominal
Emissivity:	Pre-set 0.95
Overrange:	(OL) or (-OL) is displayed

Q 1448

$198

Megohmmeter

This unit is a portable compact sized digital megohmmeter designed for simple one hand operation. This unit provides 500V to test insulation and features a back lit display, low battery indicator and auto hold and auto power off functions.

NEW FOR '99

Range:	20MΩ to 2000MΩ
Resolution:	10KΩ on 20MΩ range/1MΩ on 2000MΩ range
Measurement rate:	2.5 times per second nominal
Overrange:	(OL) or (-OL) is displayed

Q 1490

$154

Digital Map Measuring Meter

With calculator and magnifier

This handy measuring meter is a very accurate instrument for measuring distances between two points on a map, plan or physical object. Simply trace the line to be measured with the serrated driving wheel and the length measured (in either direction) is shown on the digital display. With the aid of the built-in calculator, the actual distance can be calculated by multiplying the number by the scale of the map or drawing. Includes a magnifying glass for easier reading of maps. Needs one G13 battery (included).

Q 1399

$39.95

Soil/Plant pH Meter

This Soil/Plant pH meter is specially designed to check the condition of the soil in gardens and pot plants. This will simply tell you if the soil needs pH adjustment.

Q 1392

$19.95

These microprocessor based pH meters are highly sophisticated yet economical and easy-to-use. The pHScan measure pH almost anywhere and everywhere. They are lightweight and compact enough to fit in your pocket. Use them to check water quality in many areas such as swimming pools, spas, aquariums, aquaculture, hydroponics, photographic process, cooling towers, water and wastewater treatment, boiler/steam generators, car washes, sanitation plants, ecology studies and lab applications.

Promeasure Ultrasonic Tape Measure

This sophisticated tool uses ultrasonic technology for ultra fast distance, area and volume measurements. It can measure up to 15 metres or more by using the 'SUM' feature. Suitable for use in building, real estate, engineering, surveying and DIY at home.

- Measures distances up to 15 metres
- Adds up lengths to measure longer distances('SUM' feature)
- Conversion of readings between metric and imperial
- Memorises length, height, width, area and volume
- Calculates area and volume automatically at the touch of a button
- Automatic lock for stable readings

Measurement: 60cm to 15 metres (sum button required for longer distances)
Readings: Metric/cm or imperial/inches
Ultrasonic sensor: Electrostatic transducer by Polaroid

Q 1413

NEW FOR '99

$89

Digital pH Meter

Functions: auto-power off, automatic calibration, self-diagnostics & hold

- Microprocessor makes readings fast, stable and repeatable
- Auto-off, freeze function and automatic buffer recognition
- Splash proof membrane keypad
- Accurate and easy-to-use
- Used even in laboratories

Specifications:
Range: -1.0 to 15.0pH, extended range
Resolution: 0.1 pH
Calibration: offset, at any one pf pH 4.0, 7.0 or 10.0

Q 1404

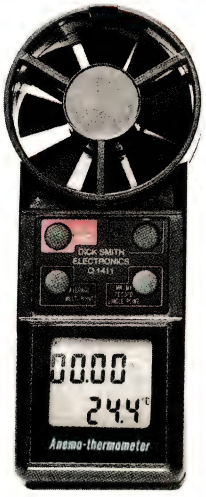
$119

Air Speed/ Temperature Meter

A highly accurate wind speed and temperature meter producing an easy-to-read digital temperature display in °C or °F, wind speed in metres-per-second or feet-per-minute. Great for boating, aviation, sports and science projects. Complete with carry case & instructions. Requires 1 x 9V battery.

Q 1411

$199



Waterproof Digital pH Meter

Don't worry if you drop this tester in water-it floats! Double 'O' ring Silicone seals keep water out and your tester safe from damage. Use it to test your swimming pool

Functions: auto-power off, automatic calibration, self-diagnostics & hold

- Robust construction, waterproof & replaceable pH sensor
- Microprocessor based, automatic push-button calibration
- Accurate and stable

Specifications:
Range: -1.0 to 15.0pH, extended range
Resolution: 0.1 pH
Calibration: offset, at any one pf pH 4.0, 7.0 or 10.0

Q 1415

EXCLUSIVE TO POWER HOUSE & direct link

NEW FOR '99

$195

LCD Digital Callipers

A hi-tech precision tool for engineers, designers, students and the serious hobbyist. These callipers give an extremely precise measurement of the external and internal diameter of just about anything from 0.01mm to 150mm. With metric/imperial conversion, zero setting for measuring deviations, accuracy of 0.03mm and repeatability of 0.01mm. As well, it has an automatic 'off' function and more!

Q 1412

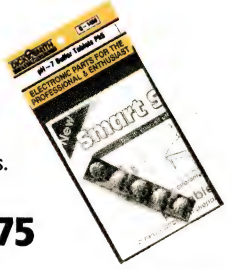
$129

pH-7 Calibration Buffer Tablets

For use with your pH meter, these buffer tablets create and maintain a stable pH in the solution and standardise electrodes for pH measurements. Comprehensive instructions included. Come in a pack of 5.

Q 1408

$7.75



Wideband RF Signal Generator

Frequency range of 100kHz to 150MHz in 6 ranges makes it ideal for checking and aligning IF circuits in tuners and TV sets.

Specifications

RF frequency range:	100kHz-150MHz in 6 ranges (up to 450MHz using third harmonics)
RF output level:	At least 100mV up to 35MHz
RF output impedance:	<500 ohms on high output 75 ohms on low (approx)
Int. modulation:	AM, 1kHz, 30%
Ext. modulation:	AM, 50Hz – 15kHz, <1Vrms for RF>30MHz
AF output:	1kHz, >1Vrms
AF output impedance:	Approx. 10K ohms in series with 10µF

Q 1312 *Limited stock*

$249

Lab Power Supply 0-30V 5 Amp Analogue Display

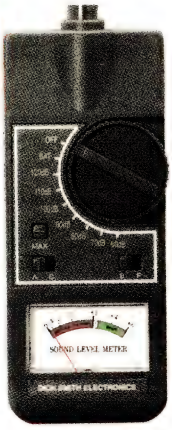
This solidly built laboratory grade linear power supply provides 0-30V adjustable output, with current up to 5 Amp continuous at all selectable output voltages. An adjustable current limit control (0-5A) is also provided. Also includes separate voltage and current metering, overload protection and a thermostatically controlled cooling fan. This unit has both high current and low current front panel terminals.

Q 1760 **12 MONTH WARRANTY**

$299

Analogue Sound Level Meter

NEW FOR '99



This analogue sound level meter is a versatile device for measuring sound intensity in just about any acoustic environment, loud or soft, high/low pitched or broad-band, intermittent or continuous. Suitable for measuring noise levels in factories, schools, offices and airports or to check the acoustics of studios, auditoriums and home hi-fi installations.

Features

- Range: 60dB to 120dB
- A and C weighting
- Fast and Slow response
- Maximum hold

Measurement frequency range 300Hz to 7000Hz

Q 1361

$129

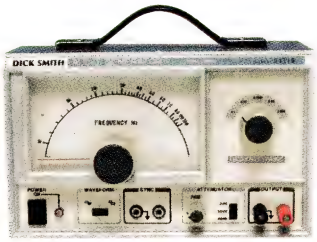
Electric Fence Lite Volt Tester

This handy pocket-sized electric fence tester will give you a clear indication of the fence line voltage. The unit has four ranges starting from 1500V to 6000 Volts. Safe and easy to use with no batteries required.

Q 1230

$35

AF Signal Generator



With a wide 10Hz to 1MHz output and high accuracy, our signal generator is sure to become an important part of your test equipment arsenal.

Specifications

Frequency range:	10Hz to 1MHz
Accuracy:	+/-3% +2Hz
Output impedance:	470 – 1100 ohms unbalanced
Output control:	0, -20dB, -40dB approx. Plus fine adjustment
Sine Wave Output	
Range:	10Hz to 1MHz
Output:	>7.8V RMS unloaded >4.3V RMS into 600 ohms
Distortion:	<0.1% 500Hz – 50kHz <0.5% 50Hz – 500kHz
Square Wave Output	
Range:	10Hz to 10kHz
Output voltage:	>15Vp-p unloaded >6Vp-p into 600 ohms
Rise time:	<0.5µS into 600 ohms in parallel with 400pF

Q 1310 *Limited stock*

$249

Lab Power Supply 0-30V 2.5Amp Digital Display

NEW FOR '99

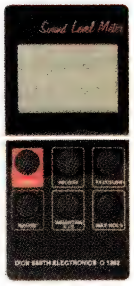
This solidly built laboratory grade linear power supply provides 0-30V adjustable output, with current up to 2.5 Amp continuous at all selectable output voltages. An adjustable current limit control (0-2.5A) is also provided. This unit includes separate voltage and current metering, overload protection and both high current and low current front panel terminals.

Q 1770 **12 MONTH WARRANTY**

$220

Digital Sound Level Meter

NEW FOR '99



This high quality, digital sound level meter provides both automatic and manual ranging and has an analogue digital bargraph. Suitable for accurate measuring of noise levels in factories, schools, offices and airports or to check the acoustics of studios, auditoriums and home hi-fi installations.

Features

- Range: 40dB to 130dB
- Auto ranging
- Manual ranging
- A and C weighting
- Maximum hold
- Record maximum/minimum
- Fast and slow response
- Analogue output
- Auto power off
- Low battery indicator

Measurement frequency range 300Hz to 6000Hz

Q 1362

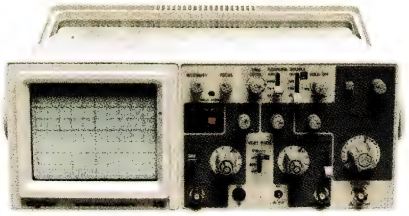
$164

Electric Fence Digital Voltmeter

This quality digital unit will give you a precise voltage reading of the fence line voltage. The unit measures up to 9,900 (9.9kV) Volts.

Q 1231

$90



Dual Trace, Dual Trigger 20MHz Oscilloscope

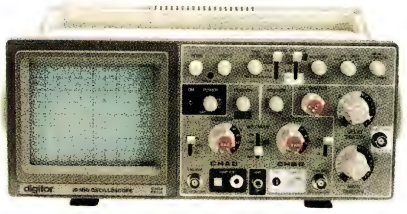
This affordable CRO suits a wide range of applications. Dual trace, dual trigger CRO with fully adjustable sweep time (20 steps), variable hold-off, fully adjustable sensitivity, switch selectable X-Y operation, selectable trigger modes, AC/TV H/TV V trigger coupling, front-panel variable trace rotation & sweep rate from 10nS/DIV to 1S/DIV. Complete with two probes.

Specifications

Sensitivity:	1 mV – 1 V/div (x5) in 1-2-5 sequence, 10 steps 5 mV – 5 V/div (x1) in 1-2-5 sequence, 10 steps
Rise time:	Approximately 17.5ns
Sweep speed:	0.1µs – 0.2 s/Div in 1-2-5 sequence, 20 steps
Sweep magnification:	10X
Operating modes:	Ch1, Ch2, Alt, Chop, Add
Trigger coupling:	AC, TV-H, TV-V
Trigger source:	Ch1, Ch2, Alt, Ext, Line

Q 1802

$649



Dual Timebase 20MHz Oscilloscope

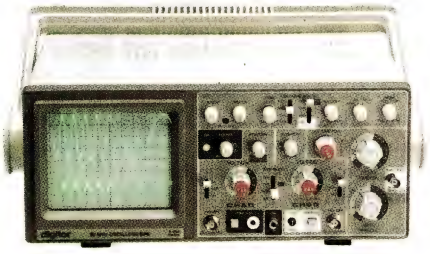
This full featured CRO is the perfect choice for design, fault finding & repair applications. Features include a beam-finder, dual time base, switch selectable X-Y axis, variable hold-off time, sweep magnification (x10), front-panel adjustable trace rotation & advanced triggering capabilities. Also has an adjustable illuminated grid & an inbuilt component tester for capacitors, inductors, transistors, diodes, zeners, etc. Complete with two probes.

Specifications

Sensitivity:	1mV – 1V/div in 1-2-5 sequence, 10 steps (x5) 5mV – 5V/div in 1-2-5 sequence, 10 steps (x1)
Rise time:	Approximately 17.5nS
Main sweep speed:	0.1µs – 0.2s/div in 1-2-5 sequence, 20 steps
Delay sweep Speed:	0.1µs – 0.2s/div in 1-2-5 sequence, 20 steps
Sweep magnification:	10X
Operating modes:	Ch1, Ch2, Alt, Chop
Trigger coupling:	Auto, Norm, TV-V, TV-H
Trigger source:	Ch1, Ch2, Alt, Line, Ext

Q 1804

$749



Dual Timebase 60MHz Oscilloscope

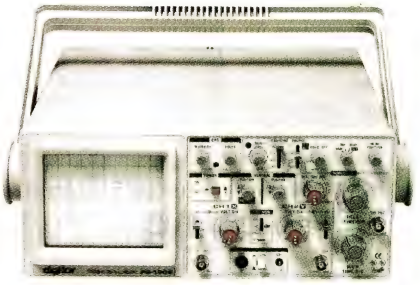
With dual-time base, make more accurate timing measurements & compare portions of a signal at two different sweep speeds. Get jitter-free triggering of delay sweeps & front-panel adjustable trace rotation. Beam finder locates the trace on the screen at the touch of a button.
Test capacitors, inductors, diodes, transistors, zeners easily with the in-built component tester. Complete with two probes.

Specifications

Sensitivity:	1mV – 1V/div in 1-2-5 sequence, 10 steps (x5) 5mV – 5V/div in 1-2-5 sequence, 10 steps (x1)
Rise time:	1mv – 1V/div: 17.5ns or 5mV – 5V/div: 5.8ns
Main sweep speed:	0.1µs/div – 0.2s/div in 1-2-5 sequence, 20 steps
Delay sweep speed:	0.1µs/div – 0.2s/div in 1-2-5 sequence, 20 steps
Sweep magnification:	10X
Operating modes:	Ch1, Ch2, Alt, Chop
Trigger coupling:	AUTO. NORM, TV-V, TV-H
Trigger source:	CH1, CH2, ALT, LINE, EXT.

Q 1806

$1195



100MHz Oscilloscope

A full featured wide bandwidth instrument suitable for demanding digital and RF applications. It's high-brightness CRT and versatile trigger and timebase facilities reveal signals invisible on lesser models. This 100MHz oscilloscope has many features including dual trace, 100MHz bandwidth, 3.5ns vertical rise time, variable delay timebase, 1mV/division sensitivity, Operating modes – Ch1, Ch2, dual, alt, dual chop, add/subtract, selectable trigger sources – Ch1, Ch2, add, external and mains synch, synch filtering for stable display of TV signals and high brightness mesh CRT with internal graticule.

Specifications

Sensitivity:	1mV-1V/div in 1-2-5 sequence, 10 steps (x5) 5mV-5V/div in 1-2-5 sequence, 10 steps (x1)
Rise time:	Approximately 3.5ns
Main sweep speed:	0.2µs – 0.5s/div in 1-2-5 sequence, 23 steps
Delay sweep speed:	0.2µs – 0.5s/div in 1-2-5 sequence, 23 steps
Sweep magnification:	10X (sweep expansion to 0.1µs/div)
Operating modes:	Ch1, Ch2, Dual, Alt, Chop, Add.
Trigger coupling:	AC, TV-H, TV-V, Slope, Norm, Ext.
Trigger source:	Ch1, Ch2, Alt, Ext, Line.

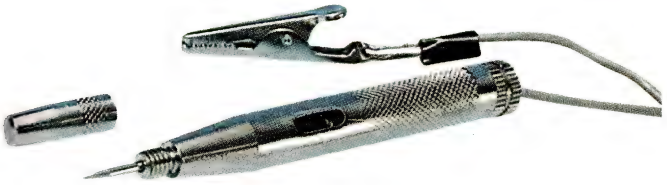
Q 1810

$1795

Universal CRO Probes

Universal probes with wandering earth leads and insulated shrouds. Both come complete with a handy pouch.

	60MHz Probe	100MHz Probe
Working voltage:	600V AC p-p (x10)	600V AC p-p (x10)
Input capacitance:	170pF(x1),27pF(x10)	150pF(x1) & 18pF(x10)
Input resistance:	9M ohm (x10)	9M ohm (x10)
Bandwidth:	60MHz	100MHz
	Q 1247	Q 1249
	$39.95	$49.95



Auto Test Probe – 12/24V

Complete with a screw-on probe-protecting cap and alligator-clip lead, this durable test probe is suitable for automotive use and measures electrical systems of 12V and 24V. An indicator globe lights when voltage is present.

Q 1539

$6.95

6V-12V-24V Voltage Tester

A perfect tool for auto electricians, this pencil-style probe checks both AC and DC voltages within the range of 6,12, or 24 volts. Use it to check for live voltages and make sure they're within the voltage range.

Q 1532

$13.50

Auto Cable Checker

This great gadget saves you having to break up looms and strip leads when checking voltages – just place the lead into the checker's piercing slot and push the slide across and a probe will pierce the insulation to give you an accurate reading of the voltage present. Also checks batteries and spark plugs.

Q 1537

$10.50

Continuity Tester

A simple continuity tester ideal for checking circuits, leads & fuses for those broken tracks or wires. Light globe is lit when a circuit is complete. Requires 1 x AAA battery (not supplied).

Q 1543

$7.95

Voltage Tester With Screwdriver

Great for checking switches, batteries, bulbs, LEDs and more. Tests AC voltage – (by contact: 70-250V max, non-contact 70-10kV AC) and has both continuity and battery testers. Also includes a screwdriver and handy pocket clip.

Q 1545

$9.95

AC Voltage Finder

Now there's no need to put yourself at risk! This device comes with an insulated tip which detects the electromagnetic field surrounding cables, sensing any AC voltage above 120 Volts, warning you with a flashing LED and audible 'buzz'.

Q 1531

$19.95

Multifunction Tester

You'll find this tester useful for performing a number of simple test functions such as detecting AC and DC voltage. You can alter its sensitivity according to testing conditions. It has a flashing LED and audible buzzer to warn you if it senses AC voltage above 100 Volts.

Q 1541

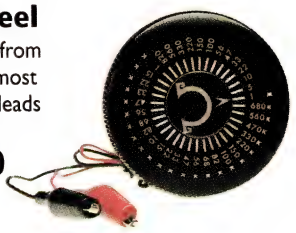
$19.95

Resistance Substitution Wheel

Convenient and easy to use. Select values from 5 ohms to 1M ohm in 36 steps using the most common divisions. Comes complete with leads and insulated crocodile clips.

Q 1410

$27.50



Logic Pulser

Can be used to inject a signal into logic circuits without removing the IC or breaking the circuit, while the short 10us duration of the output pulse (100mA) ensures that the circuit is not damaged. With switchable output (between 0.5 and 400Hz), it is powered by the circuit under test (5-15V DC).

Q 1276

$39.90

Logic Probe

A circuit-powered (4V-18V DC) logic probe that's ideal for troubleshooting and analysis of logic circuits. It is switch-selectable for TTL or CMOS circuits with adjustable threshold for each and has a maximum input signal frequency of 20MHz. With LED indicators for Hi, Lo & Pulse/Memory, and audible Logic indication.

Q 1274

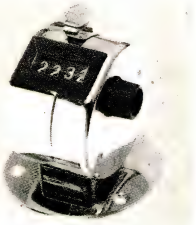
$39.90

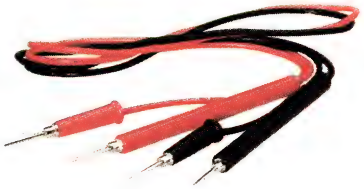
4-Digit Counter

A great low cost counter with 4 digits. Ideal for use by surveyors, schools and doormen at clubs. Unit counts up to 9999 & has a reset facility.

Q 1330

$14.95





Lead Set With Tip Plugs

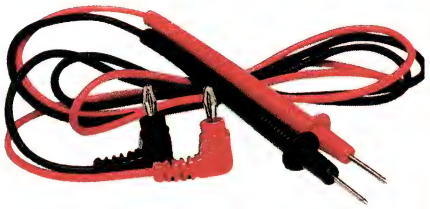
900mm lead set fitted with standard 'tip' ends (100mm long probes and 20mm long points) and 1.5mm multimeter terminal points on the other. Suitable for a wide range of multimeters.

Q 1910 **$6.50**

Leads With Banana Plugs

As used on most digital multimeters, 900mm leads fitted with standard probes and 4mm banana plugs, making them suitable for a large range of meters and other test equipment.

Q 1912 **$6.50**



Test Leads

Suitable for most analogue multimeters and a large range of other test equipment, they're fitted with 90° banana plugs and standard probes.

Q 1913 **$8.95**

Self-Retracting Coiled Lead Set

Saves the hassle of leads cluttering up the workbench. These coiled leads spring back into shape after they've been extended. Red and black with banana plugs.

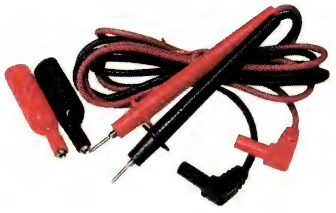
Q 1916 **$11.50**

Test Lead Set

With Removable Tips

1 metre cables with right-angle shielded banana plugs and removable tips, so you can use them as extension leads or interchange the tips.

Q 1592 **$14.25**



High-Quality Test Leads

For the latest digital multimeters. With alligator clips, fully shrouded right-angle meter plugs, 1.1-metre cables and a unique threaded 1.5mm probe with 100mm handle – it allows you to fit other tips. Puncture-tested to 3K volts.

Q 1920 **$13.75**

Universal Multimeter Carry Case

Zippered case to suit many different types of multimeters and their test leads. Medium size, black in colour.

Q 1990 **$11.50**

Universal Multimeter Carry Case

Large size, grey in colour.

Q 1992 **$12.95**

Rubber Holster

This PVC Rubber Holster is suitable for use with the Q 1417, Q 1418, Q 1419 and Q 1421, digital multimeters in our range.

Q 1995 **$7.95**

IC Clip Test Leads

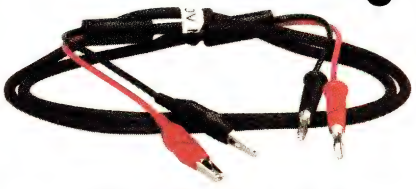
900mm test leads fitted with 4mm banana plugs one end and insulated IC clips on the other. Allows you to hook-on and leaves your hands free for adjustments, etc. Max 50V.

Q 1914 **$6.50**

Alligator Clips

Shielded alligator clip set with 230mm cables and right-angle shielded banana plugs. They're just the thing when testing components and you need more than two hands.

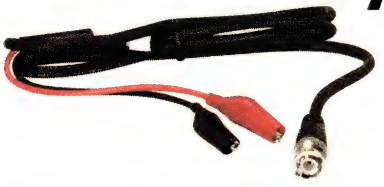
Q 1594 **$7.95**



Banana-To-Alligator Clip Leads

Ideal for most power supplies, generators and instruments that have banana plug sockets. With quality RG-58/U coaxial cable.

Q 1907 **$8.90**



BNC-To-Alligator Clip Leads

Quality universal test leads that are ideal for using with oscilloscopes, generators, frequency counters and any device that has a BNC socket. With RG-58A/U coaxial cable and colour-coded (red/black) alligator clips.

Q 1905 **$10.50**

IC Test Clip Leads

Two colour-coded leads fitted with right-angle claw hooks on each end.

Q 1904 **$8.50**

Light Duty

Colour-coded, 10-piece jumper set. Each fitted with small insulated alligator clips.

Q 1900 **$8.95**

Medium Duty

Four-piece, colour-coded jumper set fitted with medium alligator clips.

Q 1902 **$8.95**

Standard Meters

MU-45 type meters already adapted to suit almost any requirement with shunts and multipliers. With full scale accuracy better than or equal to 2.5%. All have mechanical zero adjustment. Nuts and washers supplied.

MU-45 Type Dimensions			
Scale area:	55 x 30mm	Mounting hole:	45mm
Overall:	58 x 52mm	Bolt holes:	38mm centres x 3mm bore

0-50µA
Internal Resistance: 3,500 ohms
Q 2021 **$22.50**

0-1mA
Internal Resistance: 200 ohms
Q 2011 **$22.50**

0-1A
Internal Resistance: 0.05 ohms
Q 2025 **$22.50**

0-3A
Internal Resistance: 0.025 ohms
Q 2028 **$22.50**

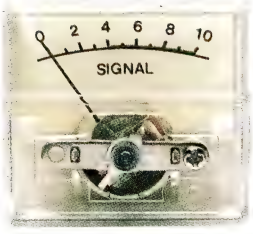
0-5A
Internal Resistance: 0.015 ohms
Q 2031 **$22.50**

0-10A
Internal Resistance: 0.008 ohms
Q 2033 **$22.50**

0-20A
Internal Resistance: 0.004 ohms
Q 2036 **$22.50**

0-20V
Internal Resistance: 1k ohm/Volt
Q 2041 **$22.50**

0-30V
Internal Resistance: 1,000 ohm/Volt
Q 2042 **$22.50**

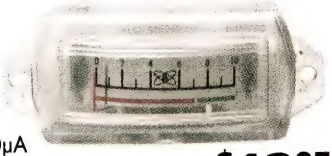


Level Meter

Particularly suitable for AM/FM tuner & receiver projects. Scale size: 34 x 17mm (same size cutting required). Impedance 1kΩ. Straw-coloured meter face, looks great back-lit. Signal Strength: 250µA FSD.
Q 2100 **$12.65**

Edge Level Meter

As used in many cassette players & amplifiers. Graduated 1 to 10 with 'battery check' strip under the main scale. Scale size: 32 x 10mm. Mounts with 2 screws, hole centres 49mm. 500µA FSD, 450 ohm internal resistance.
Q 2110 **$12.95**



3.5-Digit LCD Panel Meter

With 'full scale' of 200mV or 2V (user selectable) and a high input impedance (100M ohms). It can be self mounted and includes a mounting bezel. Comes with a comprehensive data sheet.

Features
- Single supply rail (9V)
- Low supply current (2mA max)
- Auto zeroing and over-range in-built
- Meter size: 71 x 46 x 21mm

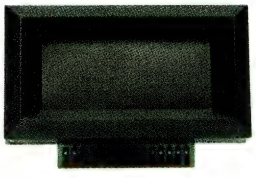
Q 2200 **$59.50**

3.5 Digit LED Panel Meter

Incorporates a dual-slope analogue-to-digital converter, 100mV reference, auto zeroing, over ranging, 200mV full scale sensitivity, 12.7mm digit height, automatic input polarity indication, full instructions supplied.

Features
- Single +5V operation
- Decimal point selectable
- Zero reading from 0V on all scales
- Input impedance >100M Ohms
- Self mountable (includes mounting bezel)

Q 2210 *Limited stock* **$59.50**

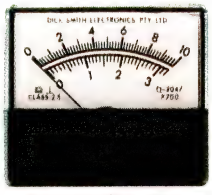


Universal Meter MU-45 Type

Combined with our Shunt Pack, this versatile universal 100µA panel meter can be easily adapted for almost any scale variation of volts, amps, ohms, etc. Operates over the range 100µA – 316mA & 1V – 100V.

Internal resistance:	3,500 ohms
Full scale accuracy:	2.5% or better (Class 2.5)
Case dimensions:	58mm wide x 52mm high

Q 2047 **$22.50**



Shunt Pack

Designed for the above panel meter, but handy for most meter conversions. Comes with shunt resistors from 1.1 to 1,000,000 ohms, resistance wire and instructions.
Q 2046 **$2.40**

A Powerful Alternative For Your Home, Boat or Caravan!

Solar power, the most economical and energy-conserving source of power for your home, boat or caravan, is fast becoming the ideal alternative to electricity. Solar energy plays a major role in telecommunications, navigational aid, medical refrigeration, rural electrification and railway signalling. With our extensive range of solar modules, you too can take advantage of the economic and environmental benefits of solar power by using it domestically.

Canon Flexible Solar Panels by Unisolar

Can be flexed to suit your individual application. Maintains a full charge on a standard 12volt battery. Perfect for boat owners, 4WD owners and other users of battery power who need their batteries ready for action when they are.

3 YEAR WARRANTY

5 Watts
- Voltage @ peak power: 16.5V
- Current @ peak power: 0.30A
- Weight: 540g
- Size: 554 x 247mm

O 3211 **$135**

11 Watts
- Voltage @ peak power: 16.5V
- Current @ peak power: 0.62A
- Weight: 910g
- Size: 424 x 554mm

O 3212 **$229**

32 Watts
- Voltage @ peak power: 16.5V
- Current @ peak power: 1.94A
- Weight: 2.14kg
- Size: 1430 x 424mm

O 3213 **$499**

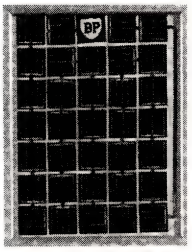
BP SOLAR

All BP solar modules are of the utmost quality. Covered in self-cleaning, toughened glass for high transmission, they employ the very latest large monocrystalline wafers, making them the most powerful, efficient solar modules available today! While all 36-cell panels and any 32-cell panels rated at over 40 watts require a regulator, smaller panels can be connected directly to a battery, making them more affordable than ever before! Water, hail and shock resistant, BP Solar Australia panels are great for mounting almost anywhere.

12 Volt 2 Watt 32-Cells

Sturdy anodised aluminium frame.
Peak power watts: 2W
Voltage @ peak power: 16.1V
Current @ peak power: 0.12A
Weight: 0.5kg
Size: 150 x 186 x 25mm (w x l x d)
O 3002
10 year limited output guarantee

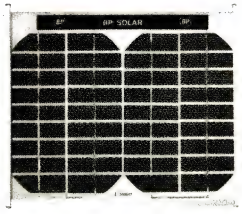
$89



12 Volt 5 Watt 32-Cells

Sturdy anodised aluminium frame with flying leads for connection.
Peak power watts: 5W
Voltage @ peak power: 15.2V
Current @ peak power: 0.33A
Weight: 1.1kg
Size: 238 x 258 x 38.5mm (w x l x d)
O 3005
10 year limited output guarantee

$125



12 Volt 16 Watt 32-Cells

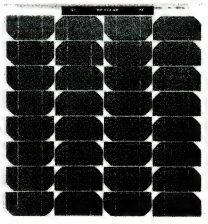
Sturdy anodised aluminium frame with flying leads for connection.
Peak power watts: 16W
Voltage @ peak power: 15.2V
Current @ peak power: 1.05A
Weight: 2.8kg
Size: 558 x 277 x 43.5mm (w x l x d)
O 3016
10 year limited output guarantee

$289

12 Volt 22 Watt 32-Cells

Sturdy anodised aluminium frame with flying leads for connection.
Peak power watts: 22W
Voltage @ peak power: 15.2V
Current @ peak power: 1.45A
Weight: 2.8kg
Size: 448 x 478 x 38.5mm (w x l x d)
O 3022
10 year limited output guarantee

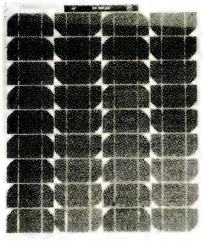
$339



12 Volt 40 Watt 36-Cell

Sturdy anodised aluminium frame.
Peak power watts: 40W
Voltage @ peak power: 17.5V
Current @ peak power: 2.28A
Weight: 5.0kg
Size: 530 x 627 x 43.5mm (w x l x d)
O 3045
20 year limited output guarantee

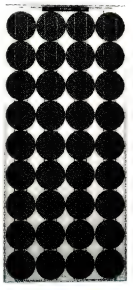
$429



12 Volt 60 Watt 36-Cell

Sturdy anodised aluminium frame with flying leads for connection.
Peak power watts: 60W
Voltage @ peak power: 17.10V
Current @ peak power: 3.51A
Weight: 7.2kg
Size: 530 x 1188 x 38.5mm (w x l x d)
O 3060
20 year limited output guarantee

$599



Available on special order

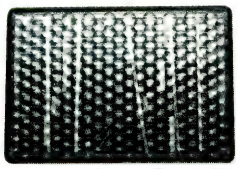
12 Watt 12 Volt Panel 32 cells	O 3012	**$229**
32 Watt 12 Volt Panel 32 cells	O 3032	**$399**
46 Watt 12 Volt Panel 32 cells	O 3046	**$499**
75 Watt 12 Volt Panel 32 cells	O 3075	**$699**

12V 20A Regulator

For use with solar panels. Maintains batteries in a high state of charge and protects them against over charging.
O 3121

$59.95

Solar Modules



Use individually or interconnected for increased voltage (series) or current (parallel).

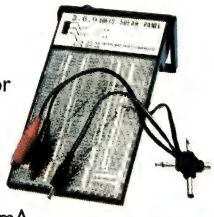
0.45V 400mA	O 2000	$3.95
0.45V 1A	O 2001	$6.95
2.0V 200mA	O 2011	$9.95

Solar NiCad Charger with Meter

Includes a meter that lets you know how strong the sunshine is and how long the batteries need to be charged. Suitable for charging 'AAA/AA/C/D' and Prismatic batteries.
O 2009

$26.95

Charger 3/6/9V Output



Comes with multi-adaptor 2m cord, alligator clips, 2.5mm, 2.1mm & 1.3mm female plugs, 3.5mm & 2.5mm male plugs. Supplies 3V or 4V at 100mA, 6V or 9V at 50mA.
O 2004

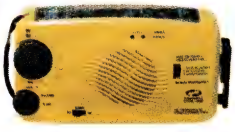
$21.95

Weatherproof Solar Torch

This water resistant torch has a nylon strap, a bicycle mounting kit, flashing LEDs and includes a warning light.
O 2045

$23.50

Solar Powered AM/FM Radio



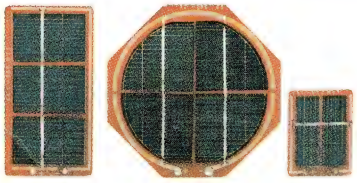
Excellent for emergency kits, this compact radio has a built-in FM antenna and can be powered four ways: through solar power, an AC/DC adaptor (not included), 'AA' batteries or a Dynamo generator.
O 2051

$29.95

Solar Powered Radio Torch Siren

A must for camping trips, this compact torch with radio has AM/FM reception, an emergency siren, flashing torch and can be powered through solar energy, an AC/DC adaptor (not included), 'AA' batteries or a Dynamo generator.
O 2052

$39.95



Solar Modules

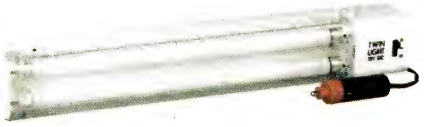
These solar modules feature tough coatings and weather protection for those rough and hot applications.

1.0V 250mA	O 2013	$6.95
1.5V 500mA	O 2015	$12.95
2.0V 500mA	O 2017	$14.95

Charger 4 x 'AA'

Charges:
1 x 'AA' size battery in 2-3 hours
2 x 'AA' batteries in 4-6 hours
3 x 'AA' batteries in 7-10 hours
4 x 'AA' batteries in 10-14 hours
in full sunlight. Batteries not included.
O 2003

$16.95

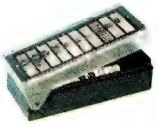


Fluoro Light 12V

Ideal for use with solar panels. Can operate using 1 or 2 tubes and comes with power lead and cigarette lighter plug attached.
O 3199

$29.95

Solar NiCad Charger



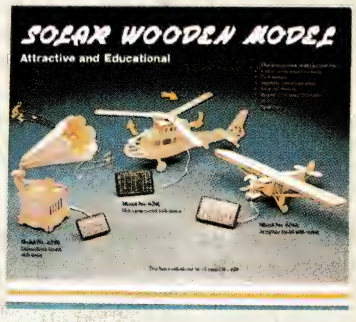
Charges:
2 x 'AAA' batteries 1-2 hours
2 x 'AA' batteries in 3-4 hours
2 x 'C' batteries in 6-8 hours
2 x 'D' batteries in 9-12 hours in full sunlight. Batteries not included.
O 2005

$14.95

Solar Educational Kit

A fun and inexpensive way to learn about solar energy. Comes with solar cell module, solar powered motor, wires and plastic turntables.
K 1060

$13.50



Solar Helicopter Kit

This kit lets you build a solar powered helicopter. Includes a motor, solar module and pre-cut assembly material. K 1062

$24.50

Solar Energy Kit

Build a solar powered fan with a comprehensive booklet, solar panel, DC motor, fan, motor stand, connection links, spanner and wiring.
K 1066

$26.95

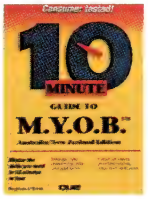
Solar 4-in-1 Construction Kit

This plastic construction kit makes aeroplanes, helicopters and more. It includes a motor powered by a small solar module that can be connected to the finished designs to make them move.
O 2033

$19.90

General

10 Minute Guide to MYOB AUS & NZ Edition



Offers simple, practical help for busy people who need fast answers and results.

B 7035

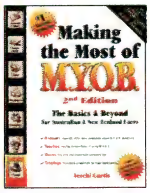
$24.95

EXCLUSIVE TO Powerhouse & direct link

Making the most of MYOB

NEW FOR '99

2nd Edition



Demonstrates how the software can assist you in your business.

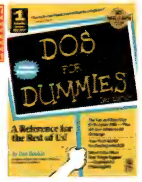
B 6761

$39.95

MSDOS for Dummies

NEW FOR '99

3rd Edition



A beginner's guide to DOS provides readers with everything they need to know about the operating system.

B 6523

$29.95

QUE Basic by Example Special Edition

Includes an introduction to QBASIC language elements, topics in data structures and more!

B 6192

$49.95

EXCLUSIVE TO Powerhouse & direct link

Windows NT 4 Resource Kit

NEW FOR '99

Provides the essential tools needed to get the most from Microsoft Windows NT Workstation.

B 6506

$160

EXCLUSIVE TO Powerhouse & direct link

Office 97 Pro 6 in 1

2nd Edition

This book offers integrated support to all the components of Microsoft Office Professional Edition and Windows 95.

B 7018

$49.95

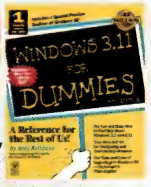
EXCLUSIVE TO Powerhouse & direct link

Windows 3.11

Windows 3.11 for Dummies

NEW FOR '99

4th Edition



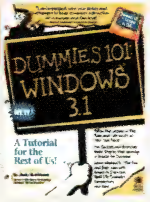
The classic authority on navigating Windows 3.11 operating system.

B 6613

$29.95

Windows 3.11 for Dummies 101

NEW FOR '99



Provides background material, goal-driven exercises, summaries, tests and more.

B 6660

$44.95

EXCLUSIVE TO Powerhouse & direct link

Windows 98

Windows 98 Beginners Guide

Step-by-step instructions and illustrations to lead you through Windows 98 and explore the many new tools.

B 6213

NEW FOR '99

$9.95

Windows 98 Made Easy

This hands-on guide is packed with ways to master basic skills quickly and move ahead to take full advantage of Windows 98!

B 6969

NEW FOR '99

$44.95

Windows 98 Resource Kit

The most complete source of professional-level information on Windows 98 available anywhere.

B 6514

EXCLUSIVE TO Powerhouse & direct link

NEW FOR '99

$160

Complete Idiots Guide Windows 98

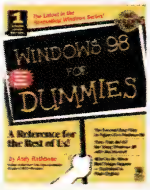
Resource for immediate results. A quick and easy guide to upgrading your system, mastering the tools and more!

B 6983

NEW FOR '99

$29.95

Windows 98 for Dummies



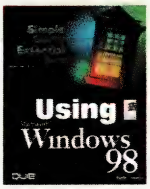
Basic step-by-step guide to Windows 98 and finding your way around.

B 6556

NEW FOR '99

$29.95

Using Windows 98



Master the vital tasks of Windows 98 with these step-by-step lessons.

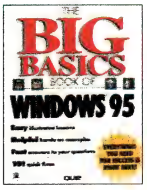
B 7044

NEW FOR '99

$59.95

Windows 95

Big Basics of Windows 95

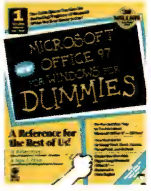


Has screen-shot illustrations of all aspects of Windows 95 operation & key Windows 95 features.

B 6527

$39.95

Office 97 for Windows 95 for Dummies



Covers the Microsoft Office 97 complete suite of programs.

B 6623

$29.95

Windows 95 Resource Kit

The complete resource for users implementing Windows 95, with tools, utilities and accessory software on CD-ROM from Microsoft.

B 6512

$99.95

EXCLUSIVE TO Powerhouse & direct link

Access for Windows 95 for Dummies

This plain English reference helps the user grasp Access basics to develop a database quickly.

B 6648

$29.95

EXCLUSIVE TO Powerhouse & direct link

Windows 95 for Dummies

2nd Edition

Takes you through Windows 95 painlessly. Updated to take advantage of new enhancements in Windows 95.

B 6521

$29.95

Complete Idiots Guide Windows 95

NEW FOR '99

2nd Edition

Covers all the latest Windows 95 updates, with easily understandable steps to mastering the program.

B 6982

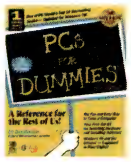
$29.95

EXCLUSIVE TO Powerhouse & direct link

Books – General

Real World Interface
2nd Edition
A hands-on guide for interfacing and controlling external devices using your parallel port.
B 6128 *Limited Stocks
NEW FOR '99 **$32.95**

Idiot's Guide to PCs
6th Edition
This book gives its readers the foundation on what a PC is and how to use it, in everyday language.
B 6999
NEW FOR '99 **$29.95**
EXCLUSIVE TO Power House & direct link



PCs for Dummies
6th Edition
Beginners start here! Computer users need to know about hardware and peripheral devices to realise their PC's full potential.
B 6617
NEW FOR '99 **$29.95**

Young @ Heart: Computing for Seniors
A senior-citizen's introduction to computer technology provides a thorough grounding in computer principles and applications.
B 6951
NEW FOR '99 **$45**
EXCLUSIVE TO Power House & direct link

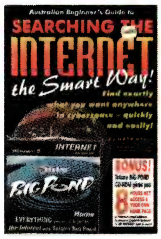
Desktop Scanners + CD
The 'no-hype' expert guide to choosing your next scanner. Includes practical, objective, information.
B 7025
NEW FOR '99 **$69.95**
EXCLUSIVE TO Power House & direct link

Palm Pilot Resource Kit + CD
The kit combines resources, both printed and software, that will enhance Pilot performance.
B 6481
EXCLUSIVE TO Power House & direct link
NEW FOR '99 **$49.95**

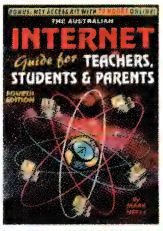
Upgrade and Repair PCs + CD
10th Edition
Combines well-written explanations with tons of reference material, a resource that will help solve almost any PC hardware problem.
B 6197
NEW FOR '99 **$109.95**

Certification of Windows NT, 98, Microsoft Exchange server and the Internet by programmers and engineers is a fast growing trend & is required by many companies. These books prepare people for the exams with in-depth information – just like taking the course. They cover the major topics and come with a CD of simulation questions and practice papers.
B 7300/7301/7302/7303/7304/7305
EXCLUSIVE TO Power House & direct link
$89.95 ea

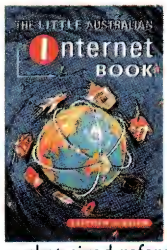
Books – Internet



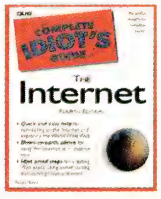
Searching the Internet
Teaches Internet users how to locate information quickly and easily, from novices to veterans.
B 6212
NEW FOR '99 **$9.95**



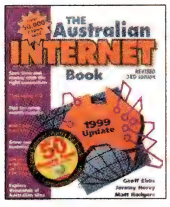
Internet Guide
4th Edition
For teachers, students and parents, this book examines the internet with hands-on information.
B 6217
NEW FOR '99 **$9.95**



Lil' Australian Internet Book
All you need to know about the Internet. A low-cost, handy, pocket-sized reference book.
B 6206
EXCLUSIVE TO Power House & direct link
$19.95

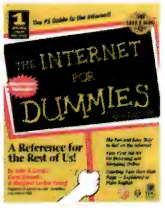


Complete Idiots Guide Internet
5th Edition
Walks users through the basic functions and shows how to access key features.
B 6985
EXCLUSIVE TO Power House & direct link
$29.95

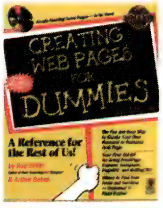


1999 Australian Internet Book + CD
This book clearly explains and shows how to use the internet for Australian conditions.
B 6733
NEW FOR '99 **$39.95**

Internet for Busy People
3rd Edition
Gets the reader up and running quickly while offering insights into how to use the Internet.
B 6971
NEW FOR '99 **$39.95**



Internet for Dummies
6th Edition
Cruise the net with ease. This updated edition, explains the basics to all beginners.
B 6631
NEW FOR '99 **$29.95**



Create Web Page for Dummies
3rd Edition
Covers everything you need to create and publish attractive and effective Web pages in one day.
B 6643
EXCLUSIVE TO Power House & direct link
$39.95

Computer

MS Combat Flight Simulator WWII

The book shows readers all the strategy gambits and tricks for a historically accurate World War II combat simulation. B 6839

EXCLUSIVE TO Powerhouse & direct link

NEW FOR '99 **$39.95**

MS Flight Simulator 98

"Microsoft Flight Simulator 98 – Inside Moves" is the ideal companion book to trust, whether the reader is a beginner eager to go solo or a veteran pilot ready to test his/her flying. B 6840

$39.95

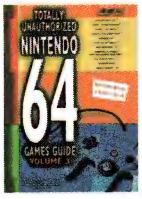
MS Age of Empires
2nd Edition

The book shows how to play the game over the Zone, and gives tips on selecting the appropriate hardware for effective play. B 6842

NEW FOR '99 **$39.95**

Nintendo 64

Totally Unauthorised N64 Guide



Volume 3 covers essential secrets, stats and strategies in detail for the hottest Nintendo 64 titles. B 9706

NEW FOR '99 **$19.95**

Totally Unauthorised Banjo-Kazooie Guide

Step-By-Step walk through leads you through all nine levels and more! B 9720

NEW FOR '99 **$14.95**

Totally Unauthorised GoldenEye Guide

All the maps, walk-throughs and tons of secrets needed to defeat old friends can be found in this helpful guide. B 9714

NEW FOR '99 **$19.95**

Legend of Zelda Ocarina of Time Official

Features Mammoth coverage of every MINI-GAME, Killer Strategy for every Boss and Maps to help navigate through all locations. B 9750

NEW FOR '99 **$24.95**

Sony Playstation

Totally Unauthorised Crash Bandicoot 2

Complete walk-throughs for the entire game, boss strategies, all the puzzle pieces, and tons of secrets. B 9708

NEW FOR '99 **$14.95**

Totally Unauthorised Crash Bandicoot 3

Includes walk-throughs for all 30 levels, Boss strategy and game secrets. B 9726

NEW FOR '99 **$14.95**

Final Fantasy 7 Official Guide

The only guide with complete coverage of the game featuring weapons, walk-throughs and much more! B 9712

NEW FOR '99 **$24.95**

Oddworld: Abes Odyssey

You need to save only 50 Mudokons to be a hero. We'll show you how to save all 99! B 9718

NEW FOR '99 **$19.95**

Secret Codes 3 for Sony Playstation

Cheats for Sony Playstation games includes secret characters, advancing levels and more. B 9722

NEW FOR '99 **$14.95**

Small Soldiers Official Guide

Features complete walk-through of the game, cheat codes to access every level plus much more! B 9724

NEW FOR '99 **$22.75**

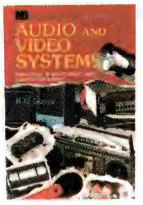
Audio and Speakers

Home Audio – Maintaining and Repairing

Step by step, this book helps you to select, install and maintain the right system for your tastes. B 1254

NEW FOR '99 **$48.50**

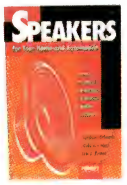
Audio and Video Systems



Covers principles, maintenance and troubleshooting with easy to understand instructions & illustrated examples. B 1257

$16.95

Speakers for your Home and Automobile



This book features a comprehensive coverage that shows how to select and build speaker systems for the home and automobile. B 1259

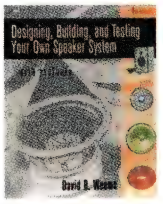
$29.65

Advanced Speaker Designs

Shows how to create high-quality speaker systems for the home, office or auditorium. B 1262

$34.85

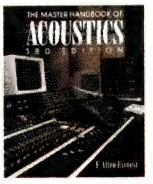
Design, Build and Test Speakers



Step-by-step instructions, how to choose speakers that are best suited for various specific uses. B 1264

$39.95

Master Handbook of Acoustics



Updated and expanded to include new chapters on computer-aided acoustical room design, digital & analogue sound processing and more. B 1749

NEW FOR '99 **$44.75**

Basic Electronics

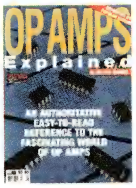
Basic Electronics

NEW FOR '99

From basic electricity to digital electronics, this book is an introduction for the hobbyist and the student.

B 3621 **$59.95**

OP Amps



NEW FOR '99

For those with interest in linear electronics, operational amplifiers and their operations and more.

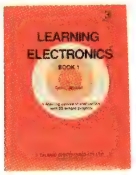
B 3623 **$59.95**

Talking Electronics Issue 1

A reprint of the first Talking Electronics publication, with field notes and practical information for the beginner.

B 3626 **$35.50**

Learning Electronics 1



An easy to follow style with laboratory-type notations & illustrations to enhance the learning process in basic electronics.

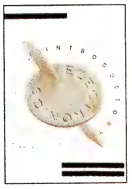
B 3670 **$35.50**

Digital Electronics Revealed

What is 'digital electronics' and what makes this the most important branch of electronics today is revealed in this book.

B 3675 **$5**

Introductory Electronics

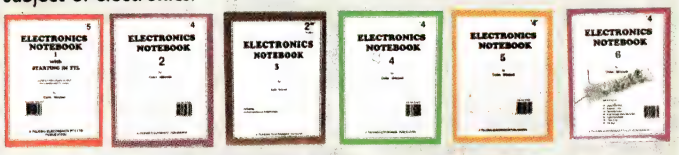


An introductory text designed for students and enthusiasts, starting from basic theory to the construction of circuits.

B 3635 **$18.95**

Electronic Notebooks Volume 1 to 6

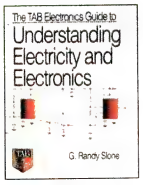
These provide, collectively, an in-depth 'hands on' knowledge of the subject of electronics.



Volume 1	Volume 2	Volume 3	Volume 4	Volume 5	Volume 6
B 3680 $5	B 3682 $4	B 3683 $4	B 3684 $4	B 3685 $4	B 3686 $4

General

Understanding Electricity and Electronics



Comprehensive and user-friendly, covers everything that a novice needs to know in becoming a competent electronics experimenter and hobbyist.

B 1748 **$36.95**

The Master IC Cookbook

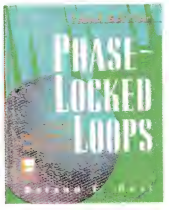
NEW FOR '99

Everything you need to know about integrated circuits fully updated with the latest information!

B 1247 **$69.95**

EXCLUSIVE TO POWER HOUSE & direct link

Phase-locked Loops



NEW FOR '99

This will give you the skills needed to design efficient phase-locked loop (PLL) circuits including digital PLLs. Includes disk.

B 1625 **$148**

EXCLUSIVE TO POWER HOUSE & direct link

Circuit Encyclopedia & Trouble-shooting

NEW FOR '99

State-of-the-art troubleshooting techniques featuring only new pre-designed circuits that are grouped by function.

B 1776 **$78.95**

EXCLUSIVE TO POWER HOUSE & direct link

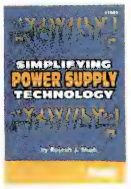
Towers International Transistor Sel.

5th Edition

The most user-friendly transistor characteristic/substitution book on the market.

B 4602 **$49.95**

Simplifying Power Supplies



Simplifies concepts of power supply technology to make it easier for hobbyists & students in understanding the fundamentals.

B 1743 **$29.95**

Regulated Power Supplies

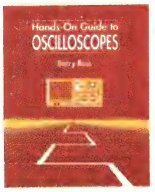
4th Edition

Includes detailed descriptions of regulation techniques, static and dynamic characteristics and components.

B 1746 **$49.95**

EXCLUSIVE TO POWER HOUSE & direct link

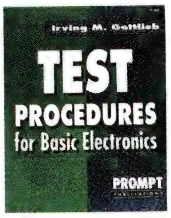
Hands-on Guide to Oscilloscopes



Comprehensively written, teaches how to understand the technology, how to interpret read-outs and the use of different oscilloscopes.

B 4803 **$49.95**

Test Procedures Basic Electronics



Covers tests procedures with an emphasis on the use of commonly available instruments.

B 1626 **$32.95**

Making Printed Circuit Boards

This book takes the reader step-by-step from schematic diagram to finished project and includes 25 different projects.

B 1630 **$44.95**

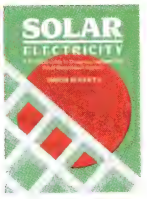
Programming Basic Stamp Computer

NEW FOR '99

This guide gives you a comprehensive tutorial on the easy to use BASIC Stamp single-board computer, which runs a PIC Microcontroller. Includes CD-ROM.

B 4807 **$77.95**

Solar Electricity Guide



NEW FOR '99

It covers technical details, installation and maintenance.

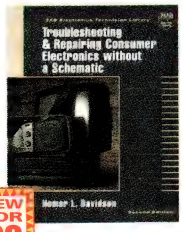
Easy to understand and written in non-technical language.

B 3000 **$54.95**

Troubleshooting and Repairing

Troubleshooting & Repairing Consumer Electronics

A guide to repairing common products such as TVs, stereos, car radios, CDs etc.
B 1638



NEW FOR '99

$49.95

Troubleshooting & Repairing Computer Printers

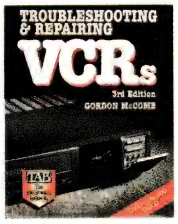
Now featuring flowcharts and detailed schematics, block diagrams and exploded-view illustrations throughout.
B 1639

NEW FOR '99

$49.95

Troubleshooting and Repairing VCRs

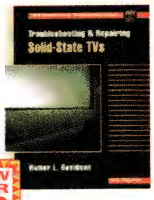
Step-by-step details on home VCR maintenance to troubleshooting power supplies and logic circuitry problems.
B 1640



$49.95

Troubleshooting and Repairing Solid State TVs

If you need accurate, thorough information on solid-state television repair, this is the most comprehensive and useful book you can buy.
B 1641



NEW FOR '99

$49.95

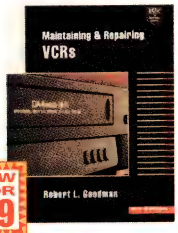
Troubleshooting and Repairing Monitors

This popular book covers most of the problems encountered and how to overcome them.
B 1645

$59.95

Maintaining and Repairing VCRs

This new edition is completely updated to cover all of the latest makes and models.
B 4805



NEW FOR '99

$49.95

Funway into Electronics

DSE Funway Into Electronics 1

This book covers 20 fascinating projects and it teaches through the building of skills and hands-on learning.
B 2600

$4.95

DSE Funway into Electronics 2

Funway 2 takes the student into soldering techniques, the use of a multimeter & printed circuit boards.
B 2605

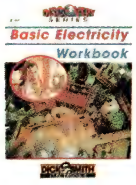
$6.95

Discovery Series

DSE Basic Electricity

In conjunction with the Basic Electricity Video, the workbook enables students to learn more about electricity.
B 1400

$7.95



DSE Basic Electricity Video

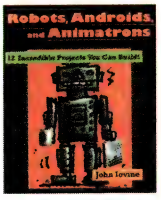
A great introduction to Electricity, this video presents the basic principals behind electricity in an entertaining & informative way.
B 1402

$14.95

General

Robots Androids and Animatrons

This book provides a unique construction guide of a robot, animatron or android that can be built in a workshop.
B 1598



$39.95

Mechanical Devices for the Electronic Experimenter

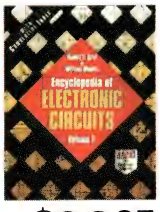
Design, build and adapt mechanical devices for interfacing to electronic control systems.
B 1632

$39.95

Encyclopedia Electronic Circuits Vol 7

NEW FOR '99

Contains new circuits drawn from popular electronics, ETI, Elektor, RCA, GE, National Semiconductors, Radio Electronics and more.
B 1768



$99.95

Six BD679/BD681 Projects

Covers six projects based on the BD679 Darlington transistor. Also includes a B0679 transistor.
B 3638

$3.50

Electronics for Model Railways 1

Build your own and save money on power supplies, traffic and signal lights and more.
B 3641

$3.50

Electronics for Model Railways 2

A practical and easy to follow guide to electronics in model railways.
B 3642

$3.80

5 More FM Bugs

Shows how to build and use, 5 more miniature FM receivers plus topical subjects on radio transmission and security.
B 3651

$3.50

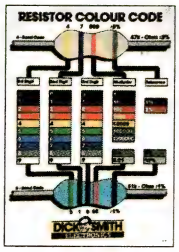
Smart Security Devices

Save money and build your own modular alarm system or add to your existing setup.
B 3652

$3.60

Poster Charts

DSE Resistor Colour Code

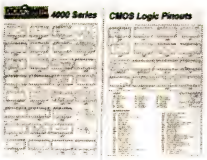


A very useful colour code chart for interpreting resistor values A2 poster.
B 1000
$39.95

DSE Capacitor Code Poster

A cross-reference used in identifying capacitor values. A2 poster.
B 1004
$29.95

DSE 4000 Series CMOS Pinout Chart



A handy pin-out reference chart, covering 46 of the most popular and used devices in the 4000 CMOS IC family. A2 poster.
B 1010
$39.95

Scanner Frequency Listings

Government Frequency NSW/ACT/ VIC/QLD

Covers radio communications frequencies used by different Government Departments across the East Coast states of Australia.
B 4133
$24.95

Scanner Fanatics Frequency Guide 1999

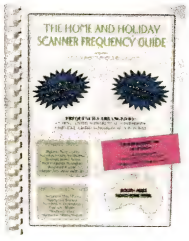
This updated version covers all the popular radio frequencies on a state-by-state basis.
B 4212
NEW FOR '99
$36.95

Listen & Scan Around Australia

Lists scanning frequencies from all over Australia. Includes Flying Doctor Service.
B 4401
$39.95

Home and Holiday Scanner Frequency Guide

Includes highway route charts and listings for country, small town and farming community areas.



SA/NT B 4404
SA/NT stores only
$36.95

QLD B 4406
QLD stores only
$39.95

NSW B 4410
NSW stores only
$39.95

VIC B 4412
VIC stores only
$39.95

Semiconductor Data Folders

Handy binders that collectively contain hard to source data on over 80 of the most commonly used ICs.

DSE Semiconductor Data Volume 1

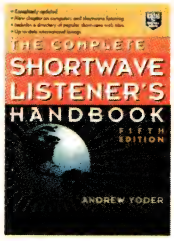
Covers: EXAR, RCA, Motorola and National Semiconductor devices.
B 5800
$29.95

DSE Semiconductor Data Volume 2

Covers: National, Philips/Signetics, Siemens and Texas instruments.
B 5802
$29.95

Shortwave Radio

The complete Shortwave Listener's Handbook

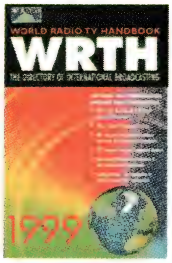


A-to-Z guide gives you complete up-to-date information on equipment, worldwide stations, satellites, computers and more!
B 2041
NEW FOR '99
$39.50

Passport to the World Band Radio 1999

The latest release with updates and equipment reviews. A great reference for shortwave radio listeners of all levels.
B 2060
NEW FOR '99
$34.95

World Radio TV Handbook 1999



Internationally best known handbook for shortwave radio enthusiasts.
1999 update includes new reviews and e-mail addresses.
B 2099
NEW FOR '99
$38.50

Telecommunications Fact Book

This easy-to-read overview of the telecommunication industry goes in depth, with specifics on systems, equipment and networks.
B 2206
NEW FOR '99
$64.95

EXCLUSIVE TO POWER HOUSE & direct link

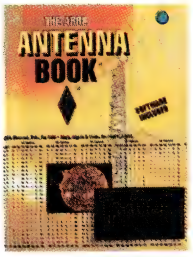
Amateur Radio

How Radio Signals Work

Gain a basic understanding of how radio signals work. Covers radio signals including broadcasting, mobile communications, aeronautical, marine, shortwave, TV, satellites and radar.
B 2106

$39.95

ARRL Antenna Handbook 18th Edition



Best source of up-to-date information on all types of HAM radio antennas plus more.
B 2212

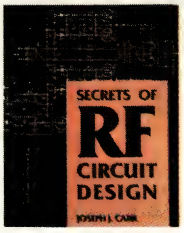
$59.95

ARRL Electronics Data 2nd Edition

A handy reference source for tables, charts, semiconductor pinouts, formulas and circuit building blocks.
B 5790

$32.85

Secrets of RF Circuit Design

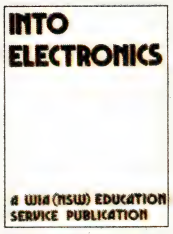


Explains RF (radio frequencies), what it is, how it differs from other electromagnetic frequencies & how RF circuits are designed.
B 2311

$49.95

EXCLUSIVE TO POWER HOUSE & direct link

WIA Electronics Education

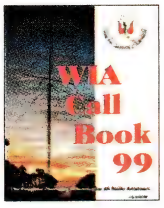


This guide provides an excellent introductory course, on the fundamentals of electronics.
B 2313

$9.95

EXCLUSIVE TO POWER HOUSE & direct link

WIA Amateur Callbook 1999



Wide range of information & the listing of call signs, names and postal addresses of all licensed Australian radio operators.
B 2343
*Limited Stocks

NEW FOR '99

$16

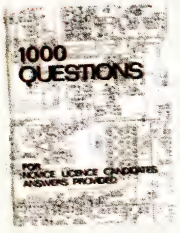
ARRL Ham Radio Handbook 1999 76th Edition

It's an unimpeachable source of data, project ideas and electronics theory. It features an overview of what hams do and how they do it and it's an invaluable supplement to the reference books and data sheets that are always nearby.
B 2236
* Limited stocks

NEW FOR '99

$59.95

WIA 1000 Questions For the Novice

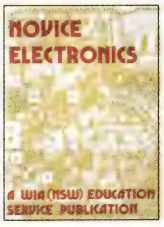


Asks the questions most likely to arise in exams. Covers laws, regulations, test equipment and more.
B 2316

$9.95

EXCLUSIVE TO POWER HOUSE & direct link

WIA Novice Level Electronics



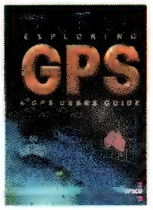
Completes the knowledge needed for the theory examination of SMA Novice Amateur Operator's Certificate.
B 2317

$9.95

EXCLUSIVE TO POWER HOUSE & direct link

GPS Satellite

Exploring GPS A Users Guide

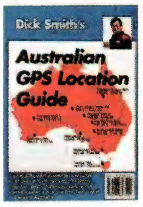


Here we side-step complicated equations and GPS-jargon and get down to the basics of how to get the most out of hand-held GPS receivers.
B 9655

NEW FOR '99

$14.50

Australian GPS Location Guide



This book covers over 16,500 GPS locations for anyone using a GPS, who wants to find their way around Australia. Includes aerodrome locations, interesting & famous places, towns, cities and other places around the country.
B 9650

$14.50

Yaesu Amateur Radio Log Book

Official Yaesu Log Book, provision for all QSO details and QSL data.
B 2029

$14.25

EXCLUSIVE TO POWER HOUSE & direct link

Yaesu Ham Operators World Map

Official World Map, features colour coding callsign areas for various countries around the world. It also shows callsign prefixes, world zones and more.
B 2030

$7.95

EXCLUSIVE TO POWER HOUSE & direct link

Satellite TV & TV Reception

World Satellite TV AUS/NZ Edition

Most authoritative guide to home satellite TV now covers the Australian and New Zealand region exclusively, with maps, charts and satellite footprints.
B 2390

$32.95

TV Across Australia 1998/1999

Provides caravaners or country residents who are installing television reception equipment, information on how to achieve good results. Includes regional maps of 760 TV areas.
B 4704

$21.95

Screws

M2 Switch Screws – Pack of 10

Suitable for most switches with threaded mounting holes. Each 2mm x 5mm. H 1674 **$2.30**

Self-Tapping Screws

Zinc-plated self-tapping screws. In handy packs of 25.

Description	Cat No.	Price
No. 4 x 6mm	H 1611	$1.85
No. 4 x 9mm	H 1634	$2.10
No. 4 x 12mm	H 1612	$2.40
No. 8 x 12mm	H 1632	$2.45

Security Torx Bolts & Screws

Self-Tap Torx Screws

9.5mm Pk 20	H 1100	$4.50

M3 Bolt Torx

9mm Zn T8 Pk10	H 1102	$3.50
12mm Zn T8 Pk10	H 1104	$3.50
25mm Zn T8 Pk10	H 1106	$3.50

Speaker Woodscrews

Black Phillips head screws ideal for mounting speakers. Two sizes. No 10 for woofers and No 6 for tweeters, mid-range, crossover etc.

NEW FOR '99

No 6 x 15 mm	H 1620	$2.95
No 10 x 30mm	H 1621	$3.95

Mixed Computer Screw Pack

10pcs x 6 types of the most commonly used computer screws. Pack of 60. H 1675 **$4.95**

Nylon

White Nylon Cheese Head Screws

Resistant to high temperatures.
Ideal for transistor and heatsink use.

Description	Qty	Cat No.	Price
Size – 4BA			
12mm Screw	10	H 1012	$2.45
25mm Screw	10	H 1022	$2.45
4BA Hex Nuts	12	H 1302	$2.95
4BA Washers	12	H 1452	$1.85
Size – 6BA			
12mm Screw	10	H 1032	$2.40
25mm Screw	10	H 1042	$2.40
6BA Hex Nuts	12	H 1312	$2.95
6BA Washers	12	H 1462	$1.85

Mixed Packs

20 washers, 20 nuts, 10 x 12mm and 25mm bolts.
M3 – H 1110
M4 – H 1130
$7.95 pk

Nuts and Bolts

M2 Screws/Nuts/Washers

Contains 12 x 12mm zinc plated bolts, 12 nuts and 12 washers. H 1683 **$7.40**

M2.5 Screws/Nuts/Washers

Zinc plated round head.
Size 2.5mm.

Description	Qty	Cat No.	Price
9mm Bolt	25	H 1206	$2.25
12mm Bolt	25	H 1208	$2.40
25mm Bolt	25	H 1212	$2.60
Hexagonal Nut	25	H 1200	$1.95
Flat Washer	50	H 1202	$2.30

M3 Screws/Nuts/Washers

Size 3mm.

Description	Qty	Cat No.	Price
9mm	25	H 1054	$1.90
12mm	25	H 1064	$1.90
25mm	25	H 1074	$2.00
Hex Nut	30	H 1324	$1.95
Shake Proof Washer	50	H 1472	$2.50
Flat Washer	50	H 1482	$2.50

M4 Screws/Nuts/Washers

Size 4mm.

Description	Qty	Cat No.	Price
9mm	25	H 1492	$1.90
12mm	25	H 1494	$1.95
25mm	25	H 1498	$2.00
Hexagonal Nut	25	H 1487	$1.95
Shake Proof Washer	50	H 1486	$2.50
Flat Steel Washer	50	H 1488	$2.50

Matrix Boards Pins & Sockets

Matrix Board Pins

Matrix board pins are designed to make connections to PCBs quick and easy.

1mm round
Pack of 50. H 5590 **$3.10**

Flat Pin
Pack of 25. H 5594 **$3.10**

Solder PCB Lug Pins
Packet of 50.* H 5591 **$3.10**

Wire Wrap Pin
Pack of 25. H 5595 **$2.50**

Matrix Sockets
Socket to suit. Pack of 25. H 5592 **$3.95**

*Limited stock

Spacers

Hex Brass Spacer9mm/4BA

Packet of 6*. H 1842 *Limited stock **$2.95**

Circuit Board Supports

Nylon PCB supports perfect for projects where PCB mounting holes are close to tracks. Require 4mm drilling in the PCB and 4.75mm clearance hole in chassis.

Description	Qty	Cat No.	Price
5mm	6	H 1981	$2.25
10mm	8	H 1983	$2.25
5mm x M3	8	H 1987	$2.25

Insulated Type

Insulated spacers complete with screws and washers. 8mm outside diameter requiring a 3mm clearance hole. Pack of 5.

Description	Qty	Cat No.	Price
10mm	5	H 1861	$6.10
15mm	5	H 1862	$6.30
20mm	5	H 1871	$6.50
25mm	5	H 1872	$6.95

Nylon Round Spacers

NEW FOR '99

Insulated spacers of various sizes. Suitable for M3 bolts.

4mm	H 1820	$1.75
6mm	H 1821	$1.95
9mm	H 1822	$2.15
12mm	H 1823	$2.35
15mm	H 1824	$2.55

Round Brass

Packs of 6mm outside diameter, round brass spacers with 3.7mm inner clearance.

Description	Qty	Cat No.	Price
6mm	12	H 1831	$4.75
9mm	10	H 1832	$4.75
12mm	8	H 1833	$4.75
25mm	6	H 1834	$4.75

Tapped Spacers

Zinc plated steel tapped hexagonal spacers to suit M3 screw. Packs of 6.

Description	Cat No.	Price
9mm	H 1882	$2.55
12mm	H 1884	$3.05
19mm	H 1886	$3.55
25mm	H 1888	$4.05

Right Angle Metal Brackets

8mm x 16mm x 6mm wide with 3mm clearance and one adjustable slot. Pack of 6. H 1895 **$7.95**

Quick Connectors

Crimp Connector Packs – 10 pack

A thousand and one uses around the home, workshop and garage, etc. Quick crimp makes fixing and joining electrical cables fast, easy and effective.

Description	Cat No.	Description	Cat No.
Female Receptical			
2.8mm Red	H 3043		
4.8mm Red	H 3044		
6.3mm Red	H 3046		
Ring Connector			
3mm Red	H 3010	6mm Yellow	H 3061
4mm Red	H 3011	8mm Blue	H 3033
5mm Red	H 3012	6mm Blue	H 3032
6mm Blue	H 3032	8mm Yellow	H 3062
5mm Blue	H 3031	10mm Yellow	H 3063
Fork Screwgrip			
3mm Red	H 3015	5mm Yellow	H 3065
4mm Blue	H 3036		
Bullet Male Connector			
4mm Red	H 3026		
5mm Blue	H 3050		
Bullet Female			
4mm Red	H 3027		
5mm Blue	H 3055		
Spade Connector			
6.3mm Red	H 3024		
6.3mm Blue	H 3042		
Spade Socket			
6.3mm Red	H 3022	6.3mm Blue	H 3040
6.3mm Insulated Blue	H 3048		
Assorted Connectors			
6.3mm Piggy Back		Blue	H 3045
6.3mm Ml/Fem/Ml wire double adapt.			H 3080
Straight Wire Joiner			
Red	H 3020	Blue	H 3038

$4.95 pk

Description	Qty	Cat No.
4mm Male bullet connector. Red	50	H 3087
4mm Female bullet conn. Red	50	H 3088
4.8mm Female recept. Red	50	H 3090
6.3mm Female recept. Red	50	H 3092
6.3mm Female recept. Blue	50	H 3093
6.3mm Female insul recept. Red	50	H 3094

Made in Australia

$10.50 pk

50 Piece LUG Set

Quality Utilux crimping tool and 50 piece LUG set. Includes a range of spade, bullet lugs and joiners.
H 5060

$29.95

High Quality Australian Made Connectors

Description	Cat No.	Description	Cat No.
Eye Terminal – Pkt. 25			
3.4mm	H 5041	5mm	H 5043
4.2mm	H 5042		
Bullet Covers – Pkt. 20			
Male	H 5045	Female	H 5046
Bullet Terminal – Pkt. 25			
Male	H 5047	Female	H 5048
Male Terminal LUG – Pkt. 25			
2.8mm	H 5052	6.3mm	H 5054
Female Terminal LUG – Pkt. 25			
2.8mm	H 5053	6.3mm	H 5055
Assorted Connectors			
6.3mm Male Lug.		Pkt 20	H 5056
6.3mm Male/Female Cover		Pkt 12	H 5057
6.3mm Quick Connect/Tab		Pkt 20	H 5049
6.3mm Quick Connect/DBL		Pkt 20	H 5051

$6.85 pk

Solder Type Quick Connectors

Description	Cat No.	Description	Cat No.
Eye Terminal			
5mm Pkt 15	H 5032		
Male Spade Terminal			
2.8mm Pkt 15	H 5038		
6.3mm Pkt 10	H 5016		
Female Spade Terminal			
2.8mm Pkt 15	H 5036		
6.3mm Pkt 10	H 5012		
Bullet Terminals			
Male Pkt 10	H 5006		
Female Pkt 10	H 5008		
Terminal Covers			
6.3mm Plastic Cover		Pkt 10	H 5022
Male Bullet Cover		Pkt 10	H 5007
Female Bullet Cover		Pkt 10	H 5009

$3.60 pk

Assorted Crimp LUG Pack

30 crimp LUGS of various types and sizes including joiners. All with insulation attached. H 1996

$6.95 pk

Wire tab joiner

NEW FOR '99

Joins two wires easily, just insert and clamp.
H 1780

$4.95

Crimp On Connectors

In packs of 10.

Small	H 1774	$1.95/pk
Large	H 1776	$2.50/pk

Wire Twist-On Connectors

In packs of 10.

Small	H 1770	$1.95/pk
Large	H 1772	$2.50/pk

BP Connectors

The quick and easy way to join or terminate wire. Suitable for 240 volts. Simply wind the wire, slip it in and tighten the screw. In packs of 10.

Standard black	H 6710	$4.25/pk
Clear 380V@ 25A	H 6715	$4.50/pk
Heavy duty clear 240V@ 32A *NEW*	H 6716	$5.50/pk

Grommets

Cord Clamp Grommets

A self locking grommet that maintains a grip on the cable without separate clamps. Packs of 4.

Hole size 12 16mm	H 1724	$1.45/pk
Figure 8 Wire	H 1725	$2.65/pk

Nylon Cable Glands

They're water tight for any sort of cable that will fit. Perfect protection!
H 1930 Qty. 2 (4-6mm Cable)
H 1932 Qty. 2 (5-10mm Cable)

$3.90 pk

Grommets

Essential for the prevention of fraying and shorts where a cable passes through a chassis, etc.

Hole Size	Bore Size	Qty	Cat No.	Price per pk
8mm	5.5mm	10	H 1712	$2.75
12mm	6mm	10	H 1716	$2.95
16mm	9mm	8	H 1719	$3.50

Flexible Grommets

Easily cut to required length.

1.0mm x 2m long	H 1720	$3.50
1.5mm x 2m long	H 1721	$3.75
2.4mm x 2m long	H 1722	$3.95

Desk Grommets

NEW FOR '99

Tidy computer cords on desks. 60mm diameter.

Black	H 1730
Almond	H 1731
Grey	H 1732

$5.95

Cable Ties

Tough and flexible, with non-slip locking action to ensure the tie won't slacken or fall off. All sizes are in handy packs of 100, 30 and 25. Indoor ties are a neutral colour, outdoor UV resistant ties are black.

Indoor Use

Size	Pack	Cat No.	Price	Colour
Packs of 25				
102 x 2.5mm	25	H 1950	neutral	$1.50
102 x 2.4mm	25	H 1955	black	$1.95
194 x 2.5mm	25	H 1951	neutral	$2.95
194 x 2.4mm	25	H 1956	black	$3.45
292 x 3.5mm	25	H 1952	neutral	$4.95
292 x 3.5mm	25	H 1957	black	$5.45
370 x 4.8mm	25	H 1953	neutral	$6.95
370 x 4.8mm	25	H 1958	black	$7.45
Packs of 100				
102 x 2.4mm	100	H 1974	neutral	$5.95
102 x 2.4mm	100	H 1980	black	$6.95
194 x 2.4mm	100	H 1982	black	$10.95
194 x 2.4mm	100	H 1976	neutral	$10.95
Packs of Assorted Cable Ties				
Assorted	30	H 1960	neutral	$3.75
Assorted	30	H 1962	black	$4.25

Releasable Cable Ties

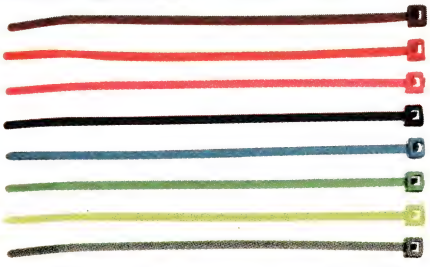
Cable ties that can easily be released and re-tied. They're suitable for indoor or outdoor use. In handy packs of 100.

100mm x 4.5mm	H 1995	$9.95
194mm x 4.5mm	H 1997	$11.95

Cable Ties – Pack 25

Identity Tag (tie length 102mm)	H 1973	$2.95
Identity Tag (tie length 194mm)	H 1975	$4.95
Push Mount (tie length 155mm)	H 1971	$5.95

Mixed Coloured Cable Ties



Small 96mm (10cols x 10pcs)	Pack 100	H 1959	$9.95
Large 190mm (10cols x 10pcs)	Pack 100	H 1961	$14.95

Mixed Pack Terminals/Ties/Clips

Handy selection for all your hobby and project needs.*
H 3099 *Limited stock $12.95

Velcro Cable Ties

These handy cable ties are made from the original 'Velcro' brand material. Ideal for too many uses to list here, they're re-usable time and again.
200mm x 12mm. Pack of 5.
H 1945 $7.50

Wonder Colour Cable Strap

NEW FOR '99

Pack of 10.
15 x 165mm.
H 1949 $8.50

Velcro Cable Straps

Re-usable cable ties that you can open or close to add or remove cables. Packs of 10.

25 x 200 mm	H 1946	$13.50
25 x 300 mm	H 1947	$16.50

Velcro Colour Cable Strap

10 Pack of 25mm x 200mm (re-usable) mixed.
H 1948 $14.95

Cable Tie Mounts

Self-adhesive mounts with slot for securing cable ties to instrument cases, etc.

Pack of 10		
19 x 19mm ***NEW***	H 1989	$2.75
Packs of 50		
19 x 19mm	H 1991	$10.50
25 x 25mm	H 1993	$13.50

Stick-On Cable Clips

Adhesive backed plastic clips to hold your cable in place.

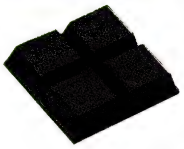
Large White Pk of 10	H 1904	$6.50
Small White Pk of 20	H 1906	$8.50

Cable Clamps

Heavy duty nylon cable clamps.
In packs of 5.

Cable diameter	Cat No.	Price
5mm	H 1964	$1.50/pk
6mm	H 1965	$1.50/pk
8mm	H 1966	$1.50/pk
13mm* ***NEW***	H 1963	$1.75/pk
19mm* ***NEW***	H 1967	$1.95/pk

Rubber Feet

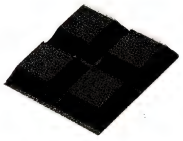


Self-Adhesive (Small)

15mm x 15mm square rubber feet. Pack of 4.
H 1745 $1.65

Acrylic Feet

Self-adhesive clear acrylic feet. Pack of 4.
H 1740 $2.25



Self-Adhesive (Large)

20mm x 20mm rubber feet. Pack of 4.
H 1749 $2.10

Screw-On Round

13mm round rubber feet. 3mm fixing hole.
Pack of 8.
H 1736 $2.95

Rubber Feet 11mm x 5mm

Pack of 4.
H 1748 $1.95

Large Rubber Feet

Pack of 4.
18mm (D) x 10mm (H).
H 1741 $3.85

Jumbo Rubber Feet

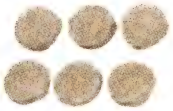
Pack of 4.
34mm (D) x 17mm (H).
H 1739 $6.45

Felt adhesive – medium duty felt

NEW FOR '99

13mm round	H 1750	$1.95
19mm round	H 1751	$2.25
25mm round	H 1752	$2.50

Felt adhesive – heavy duty felt



NEW FOR '99

19mm round*	H 1753	$5.95
28mm round*	H 1754	$6.95
47mm round*	H 1755	$7.95

Felt adhesive roll* – medium duty

H 1756 $9.95

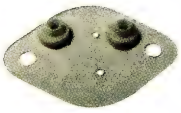
NEW FOR '99

*EXCLUSIVE TO Power House & direct link

Mica Washer Insulation Kits

H 1937 TOP-3 transistors
H 1936 TA-11B transistors
H 1938 TO-264 transistors

$1.95 pk



Packs of 4
H 1917 TO-3 Transistors plus bushes

$1.95

TO-3 Insulating Cap

High-quality plastic cap that simply press-fits onto TO-3 transistors H 1918

$1.05

TO-220 Mounting Kit

Pack of 5 quality insulating washers and bushes to suit TO-220 type semis H 1916

$1.60 pk

Silicon Insulators

Transistor washers that do not require silicon grease but have the same effectiveness as mica and grease. Packs of 10.

H 2916	TO-220	$1.95
H 2918	TO-3P	$2.50
H 2917	TO-3	$3.95

LED Holder

Description	Cat No.	Price
LED Bezel 3mm clip-type Pack of 15	H 1933	$2.25
LED Bezel 5mm clip-on rectangular Pack of 10	H 1931	$1.95
LED Bezel 5mm clip-type Pack of 15	H 1934	$2.25
LED Bezel 5mm mounting Pack of 15	H 1910	$2.75
LED Bezel 5mm holder right angle Pack of 10	H 1935	$3.25

Economy Heat Transfer Compound

Silicon-based compound for thermo coupling of electronic components and heatsinks. High-heat conductive property allows heat to pass freely where heat dissipation and dispersion is important. 10g tube. N 1205

$3.95

Heat Transfer Compound

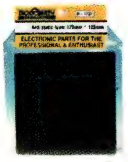
Non-silicon compound for reliable and efficient dissipation of heat. Should be applied to base and mounting studs of components, thermostats and heatsinks. 10ml/20gm syringe. N 1200

$9.95

Anti-Static Bags

In packs of 5

H 6020	76 x 127mm	$1.95
H 6025	76 x 203mm	$2.95



Anti-Static Sheet

Dissipate dangerous static electricity which can destroy semiconductors in integrated circuit chips (ICs). By pushing the semiconductor legs firmly into the sheet, introduction of static electricity is virtually eliminated. Sheets can be cut down in size. 125 x 125mm sheet. H 1737

$3.95

Rubber Magnet

Can be cut to any shape or size. Adhesive backing for sticking to small tools, templates etc. Great for arts and crafts, hobbies, schools etc. H 6030

$2.95

Mixed Magnet Set

Each packet has a variety of magnets. Great for experimenting with magnetic fields. H 6000

$4.95 pk

4-piece Magnet Set

This all purpose magnet set is great for experiments and hobbies. H 6006

$7.95

Heavy Duty Large Horseshoe Magnet

NEW FOR '99

H 6007

$8.95

EXCLUSIVE TO POWER HOUSE & direct link

Super Heavy Huge Horseshoe Magnet

NEW FOR '99

H 6008

$14.95

EXCLUSIVE TO POWER HOUSE & direct link

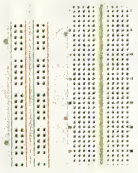
Mixed Spring Pack

With 30 different springs including battery terminal springs, compression springs, tension springs and loop/return springs. 30 pieces. H 1676

$8.50 pk

WBU-DJ Breadboard Addon

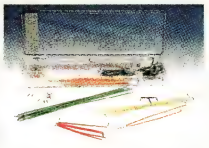
NEW FOR '99



High-class acetal material allows insertion hole to withstand wear & tear without easily deforming.

H 4033 *NEW*	Tiny	$6.95
H 4034 *NEW*	Medium	$12.95

Jump Wire Kit



140 jump wires in 10 different colours and 14 different lengths. All with right-angled bend at each end. In handy plastic divider box. H 4030

$10.95

Audio Drive Belts

Comes in assorted packs of 10.

Sizes include:
25mm x 1.2mm x 1.2mm
40mm x 1.2mm x 1.2mm
44mm x 1.2mm x 1.2mm
46mm x 1.2mm x 1.2mm
49.5mm x 1.2mm x 1.2mm
57mm x 1.2mm x 1.2mm
105mm x 1.2mm x 1.2mm
125mm x 1.2mm x 1.2mm
82.5mm x 1.4mm x 1.4mm
100mm x 1.6mm x 1.6mm
H 6015

$6.45 pk

Video Drive Belts

Comes in assorted packs of 14.

Sizes include:
32mm x 1.2mm
40mm x 1.2mm
45mm x 2.0mm
60mm x 1.0mm
70mm x 1.0mm
83mm x 1.6mm
97mm x 1.2mm
98mm x 2.4mm
114mm x 1.8mm
121mm x 2.3mm
56mm x 0.8 x 8.0mm
76mm x 0.6 x 6.0mm
91mm x 0.6 x 5.8mm
92mm x 1.2 x 10.0mm
H6016

$10.75 pk

Breadboards

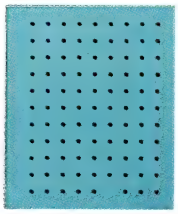
Similar to the Breadboard Kits, only without the baseplate. Clip together to make boards to just about any required size. Supplied as board only.

No. Distribution Buses		No. Holes	No. Buses	Cat No.	Price
Small	2	300	60	H 4035	$10.95
Medium	4	630	126	H 4045	$15.95
Meduim	8	640	128	H 4044	$17.95
Large	10	800	160	H 4025	$19.95

Breadboard Kits

Ideal for low voltage designs. Faster, easier and cleaner than working directly onto PCBs. Mounted on a baseplate with non-slip feet and holes for binding posts, each has a selection of jump wires and binding posts.

No. Distribution Buses		No. Holes	No. Buses	Cat No.	Price
Small	10	800	160	H 4020	$32.95
Medium	8	1260	252	H 4040	$42.95
Medium	4	1600	340	H 4041	$49.95
Large	14	2520	504	H 4042	$62.95
X-Large	30	3200	640	H 4022	$74.95



Plastic Project Board

122 x 110 x 14mm plastic breadboard as used in Funway Into Electronics. 98-hole matrix for connections and securing components.

H 4050 **$3.25**

Aluminium Sheet

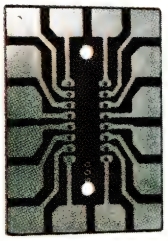
Blank aluminium sheet ideal for making front panels and folding into small boxes. 18 gauge, measures 300x300mm.

H 2560 **$9.80**

Blank Printed Circuit Boards

Heavy-duty FR-4 epoxy glass PC board with permanently bonded 1oz copper on one or both sides. Available in three sizes.

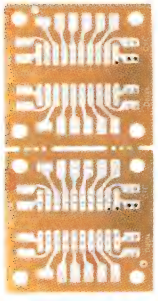
Single Sided		
150 x 74mm	H 5540	**$3.10**
150 x 150mm	H 5545	**$5.00**
300 x 300mm	H 5550	**$17.75**
Double Sided		
150 x 74mm	H 5555	**$4.50**
150 x 150mm	H 5560	**$6.50**
300 x 300mm	H 5565	**$19.50**



16-Pin IC PCB Board

Save time and money with this pre-etched, pre-drilled, pre-cut 16-pin PCB. Use in most projects. Measures 54mm x 38mm. Pre-drilled mounting holes.

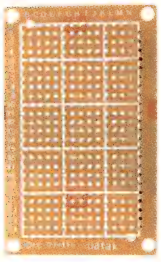
H 5600 **$2.75**



8 to 20 Pin Dual IC PCB Board

Dual PCB boards are pre-etched and pre-drilled. Use both sides of the PCB boards that are pre-drilled 8 to 20-pin wide or cut in half and use as separate PCBs.

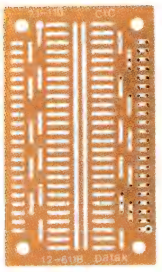
H 5601 **$3.25**



Small Experiment Prototype Board

This small versatile board has etched copper pads. Each board has 371 holes and is 47 mm (W) x 72 mm (L).

H 5603 **$2.60**



Small Prototype Board

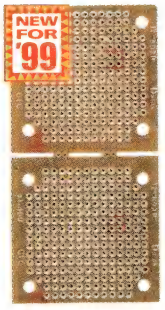
This PCB allows for multiple ICs connections with its 118 links available. Each board has 310 holes, 44mm (W) x 75mm (L).

H 5604 **$2.80**

Medium Experiment Prototype Board

This PCB allows for multiple ICs connecting with its 98 links available. Each board has 417 holes and is 47mm (W) x 72mm (L).

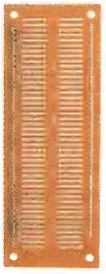
H 5608 **$2.75**



PCB Dual Prototype Board

This small, versatile board has etched copper pads. Each board has 198 holes or a total of 396 holes for both sides. Use together or cut in half and use as separate PCBs. Size: 46mm(W) x 93mm(L).

H 5607 **$3.10**



Medium Prototype Board

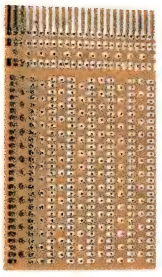
This PCB also allows for multiple ICs connections. Also has numeric numbering system to facilitate positive pin identification. Each board has 503 holes, 49mm(W) x 131mm (L).

H 5605 **$3.25**

Large PCB Prototype Board

This versatile PCB has etched copper pads. Each board has 2,200 holes. Also has numeric & alphanumeric system to help positive pin identification and is 115mm(W)x160mm(L).

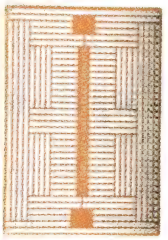
H 5609 **$6.95**



Plug-In IC Boards

With 2.54mm pin spacing to accept up to 14 x 14-pin or 16-pin ICs, or up to 20 mini-dip ICs. Silver-plated lands and 24-way plug for use with a 24-way edge connector. 60mm x 100mm.

H 5610 **$4.35**



Prototype Board

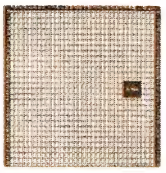
Designed by our R&D staff! Similar to 'Veroboard' but has the advantage of tracks running in both directions. Can accommodate digital designs. Typically 2 x 14 or 16 PIN, or 5 x 8 PIN devices. Tracks are corrosion-resistant plating punched with 936 holes on a 0.1" grid.

H 5660 **$5.35**

Printed Stripboards

The most versatile board! Etched copper strips are pre-drilled and plated ready for solder. Alphanumeric grid helps positive pin identification. Each board has 2.54mm hole spacings. Size 88 x 153mm.

H 5616 **$6.95**



Versa Strip Boards

Continuous pre-drilled stripping on a high-grade insulator. It's similar to the old English Veroboard. 2.54mm hole spacing.

Size	Cat No.	Price
76 x 88mm Board	H 5614	**$2.90**
88 x 153mm Board	H 5612	**$4.10**
95 x 308mm Board	H 5112	**$7.70**

Matrix Board

Tough phenolic board with punched holes. Ideal for prototypes, bread boards, projects, etc. 2.5mm hole spacings on a 75mm x 76mm board.

H 5310 **$2.95**

Printed Mounting Strip

A handy 47-way mounting strip for resistors, capacitors, etc. Terminals are numbered for easy identification.

H 6610 **$3.85**

Fibreglass Board

Single sided printed circuit board, silk screened. 95 x 85mm, 948 holes.

A. Prototype	H 5613	**$9.50**
B. Matrix	H 5615	**$9.50**

Double-sided printed circuit board, silk screened. 103 x 60mm, 640 holes.

C. Prototype	H 5611	**$10.75**

Making or Repairing PCBs? See page 161

Zippy Boxes

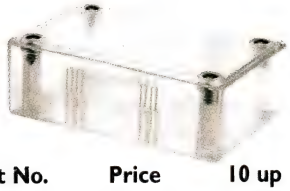
With Both Aluminium and Plastic Lids!

Preferred and used by the major electronics magazines because of their quality, versatility and value. Ideal for a wide range of applications, they're made from impact-resistant ABS plastic and have deep ribs which add to the strength and are ideal for mounting PCBs without screws. Each comes with two lids, one aluminium and the other plastic, which can be sealed against the weather.

Description	Size (mm)	Cat No.	Price	10 up
Small – UB5	28 x 54 x 83	H 2855	$3.35	$3.18
Medium – UB3	41 x 68 x 130	H 2853	$4.45	$4.23
Large – UB1	50 x 90 x 150	H 2851	$5.65	$5.37
Giant – UB2	60 x 113 x 196	H 2852	$7.65	$7.27

Clear Style Zippy Boxes

See your handiwork clearly with these tough ABS plastic boxes with strengthened ribbing.

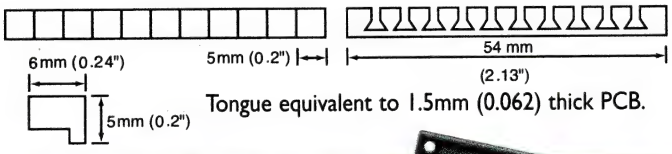


Description	Size (mm)	Cat No.	Price	10 up
UB5 Style	28 x 54 x 83	H 2955	$4.50	$4.28
UB3 Style	41 x 68 x 130	H 2953	$5.50	$5.23

PCB Slot Boxes With 'Tractor Grip'

If you're building a project that's PCB-based, these are exactly what you need! Available in seven handy sizes and made of strong grey ABS plastic, they come complete with case screws and 'tractor-grip' board supports that mesh with matching grooves on all four sides of the case's interior to ensure your PCB stays put! PCB not included.

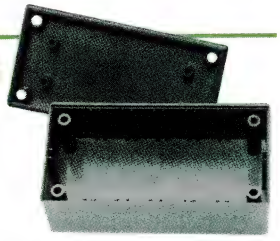
Description	Size (mm)	Cat No.	Price	10 up
(GG-01)	55 x 55 x 42	H 2870	$4.50	$4.28
(GG-02)	75 x 50 x 27	H 2872	$4.95	$4.70
(GG-03)	85 x 56 x 40	H 2874	$5.50	$5.23
(GG-04)	100 x 50 x 40	H 2876	$6.05	$5.75
(GG-05)	125 x 60 x 40	H 2878	$6.60	$6.27
(GG-06)	145 x 85 x 50	H 2880	$7.70	$7.32
(GG-07)	180 x 110 x 60	H 2882	$9.95	$9.45



Tongue equivalent to 1.5mm (0.062) thick PCB.

Black Project Boxes

A great range of versatile project boxes. Ideal for a wide range of applications. The lids have four mounting stand-offs to easily accommodate PCBs.



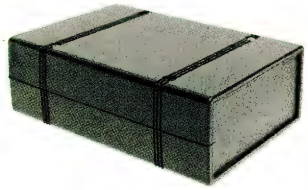
Description	Size (mm)	Cat No.	Price	10 up
EBP-1B	48 x 95 x 37	H 2840	$4.95	$4.70
EBP-2B	60 x 115 x 43	H 2841	$5.95	$5.65
EBP-3B	75 x 135 x 49	H 2842	$6.55	$6.22
EBP-4B	95 x 160 x 61	H 2843	$7.15	$6.79

Plastic Cases

88 x 43 x 128mm

Compact economical case, black in colour. Great for general use, comes with assembly screws.

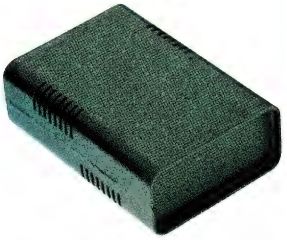
H 2502 **$13.50**



95 x 45 x 145mm

A precision instrument case that has specially designed vents to allow the free circulation of air. Snap together design with front and back panels.

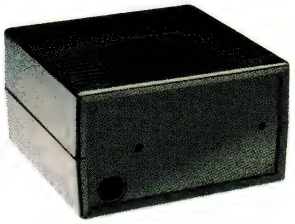
H 2503 **$15.50**



135 x 75 x 130mm

Top and bottom air vent slots make this ideal as a power supply case (or for other heat generating projects). PCB mounting slots are suitable for various sized PCBs up to 130 x 70mm. Comes with assembly screws.

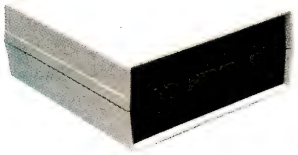
H 2516 **$14.95**



155 x 65 x 160mm

Has 16 vertical mounting slots for 145mm long PCBs (up to 55mm high) and 23 mounting points for horizontal PCBs. Top and bottom halves screw together. Includes front and back panels and screws.

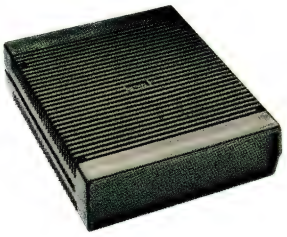
H 2508 **$13.70**



210 x 55 x 175mm

Just the right size and shape for a large range of instruments, communications equipment, etc. Has removable front and rear panels and provision for speaker at both top and bottom. Comes with assembly screws.

H 2520 **$15.95**

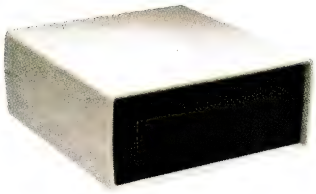


200 x 65 x 160mm

Slotted to allow many and varied PCB mounting positions. Attractive and sturdy, It's ideal for a large range of projects and instruments. Comes complete with black plastic front and rear panels plus assembly screws.

H 2505 **$14.40**

Blank front/rear panel to suit H 4052 **$1.95**

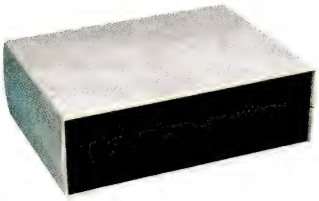


250 x 190 x 80mm

Superbly moulded and fitting instrument case which separates into two halves and has plastic front and rear panels. There are plenty of PCB mounting slots for mounting either vertically or horizontally and it comes with assembly screws.

H 2507 **$18.80**

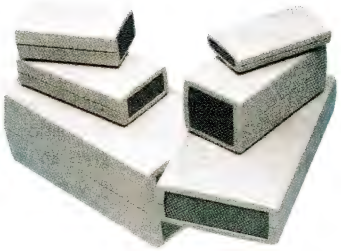
Blank front/rear panel to suit H 4054 **$1.95**



High Quality ABS Plastic Boxes

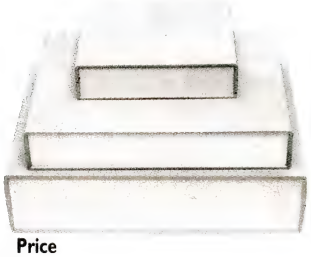
These moulded plastic cases are ideal for many kit and design applications.

Size (mm) L x W x H	Cat No.	Price
90 x 50 x 16mm	H 2831	$3.80
90 x 50 x 32mm	H 2832	$4.75
120 x 60 x 40mm	H 2833	$7.50
150 x 80 x 30mm	H 2834	$8.50
190 x 100 x 40mm	H 2835	$12.95
190 x 100 x 90mm	H 2836	$14.85

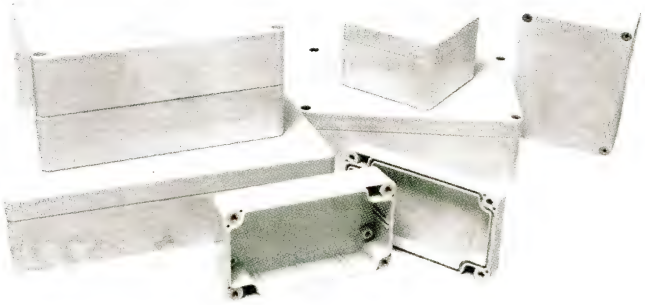


Instrument Cases

These high impact ABS plastic cases have a two-part design with a tongue groove joint. They are lightly textured which affords a non-scratch surface and maintains a high quality finish. Features guide slots for vertical mounting of PCBs.



Size (mm) L x W x H	Cat No.	Price
110 x 140 x 35mm	H 2512	$8.50
165 x 225 x 40mm	H 2513	$14.50
180 x 260 x 65mm	H 2514	$18.50



Sealed Polycarbonate Boxes

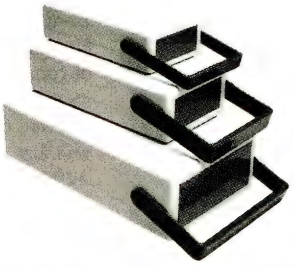
Made from tough polycarbonate thermoplastic, these 3mm wall thickness boxes are ideal for uses requiring a quality sealed enclosure that's more rugged than most ABS boxes. They feature a tongue and groove sealing system with a neoprene gasket, and the stainless steel lid fixing screws thread into brass inserts that are outside of the sealing area. These boxes are designed to IP65 of IEC529 and NEMA4 (dust and hose-proof), and have a wide – to 100°C operating temperature. Internal threaded brass inserts allow for easy mounting of PCBs or terminals.

Size (mm) L x W x H	Cat No.	Price
115 x 65 x 40mm	H 2860	$11.35
80 x 82 x 55mm	H 2869	$13.50
115 x 90 x 55mm	H 2863	$14.60
171 x 121 x 55mm	H 2864	$18.90
171 x 121 x 80mm	H 2867	$25.50
146 x 222 x 55mm	H 2865	$28.95

Hobby Box with Handle

Size (mm) L x W x H	Cat No.	Price
131 x 67 x 34mm	H 2846*	$14.95
131 x 67 x 57mm	H 2847*	$15.95
160 x 80 x 44mm	H 2848*	$17.95
197 x 110 x 56mm	H 2849*	$19.95

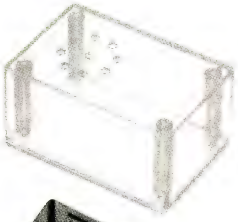
*Limited stock



Small Clear Box

with pre-drilled speaker holes.
Ideal for small audio style projects.
83 x 55.5 x 44mm
H 2858

$3.85



Utility Junction Black Box

They are ideal for many applications with square cable entries on each end.

Size (mm) L x W x H	Cat No.	Price
65 x 38 x 27	H 2921	$1.95
82 x 57 x 33	H 2923	$2.95

Plastic Case

Small plastic case that clips together.
Ideal as an alarm transmitter case.
60 x 45 x 10mm.
H 2495

$4.95

Mini PCB Mount Battery Terminal

10x(+VE) & 10x(-VE) Terminals
H 2493

$2.95

PJ Box

A well finished mini case which is ideal for all-weather projects! Made in two identical halves which can be glued together for a water-tight seal.
90 x 56 x 32mm.
H 2857

$5.95

Hand-held Case with Terminals, Red Lens

This case comes with two plastic panels, one grey and one red perspex. This case has a battery compartment that can accept 2 x 'AA' or one 9V Battery. (L) 135mm x (W) 70mm x 24mm(H)
H 2949

$7.70

Box with Battery Compartment

Size (mm) L x W x H	Cat No.	Price
Small 139 x 55 x 23mm	H 2950	$10.95
Large 183 x 73 x 28mm	H 2951	$16.50

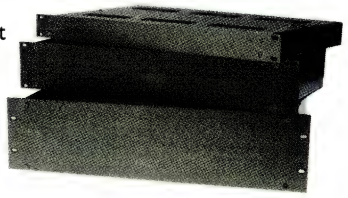
Handheld Case

Features a battery compartment, a professional tilting stand, a solid display area that can be cut |out if required. The top and bottom sections incorporate a tongue and groove sealing system which uses a gasket. It accepts either a 9V or 2 x 'AA' batteries. The size is 180 x 100 x 40mm.
H 2952

$16.15

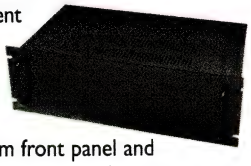
Professional 19" Rack Cases

Heavy-duty steel rack cases designed and built to professional/industrial standards, yet priced to suit the enthusiast. This series complies with IEC 297, IEA RS-310 C1977 & DIN41494 standards and are compatible with all 19" equipment. Each is supplied with an aluminium front and rear panel, as well as a spare "unflanged" front panel which allows switches, pots, etc to be mounted so that only the shaft passes through the front panel. Eight mounting rails are supplied, ideal for installing heavy transformers independently of the cover panels, and to improve structural rigidity. These boxes come packed flat for convenient shipment and storage, yet are very easy to assemble.



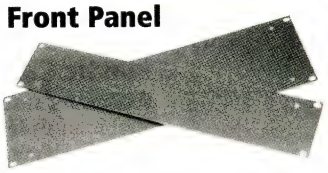
Description	L x H x D (mm)	Cat No.	Price
1U 19"	424 x 38 x 254	H 2682	$69.50
2U 19"	424 x 81 x 254	H 2684	$88.80
3U 19"	424 x 127 x 332	H 2686	$98.80

Economy 19" Rack Case



Quality black instrument case fits standard 19" racks. Supplied flat and can be assembled in minutes. Heavy gauge (3mm) aluminium front panel and slotted steel top and bottom panels.
Size: 420 x 250 x 140mm.
H 2481 **$78.30**

19" Front Panel



*Spare 1U Panel	H 2683	$10.95
*Spare 2U Panel	H 2685	$16.45

*Limited Stock

Plastic Storage Cases

Durable plastic cases with separate compartments and locking lid.

Type	Cat No.	Price
1 Compartment ***NEW***	H 2492*	$3.95
5 Compartment	H 2498	$4.25
6 Compartment ***NEW***	H 2491*	$4.95
14 Compartment	H 2499	$5.50
12 Compartment	H 2598	$10.50
18 Compartment	H 2599	$11.50

*EXCLUSIVE TO POWER HOUSE & direct link

Component Case with Adjustable Divider

Component storage box with up to either 18 or 21 adjustable compartments for storing components, nuts and bolts or sewing accessories.

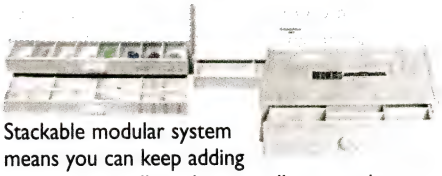
Small: 200 x135 x 40mm ***NEW***	H 2603	$8.95
Large: 275 x180 x 45mm	H 2602	$14.95

StorPak 63 With Drawers

Three-drawer stackable storage unit.
H 2590
$22.50

*Limited stock

Bits-&-Pieces Modular Compartment Drawers



Stackable modular system means you can keep adding drawers vertically or horizontally to get the storage size you want. Stores small items in the 15 or 14 dividable compartment.

Small stackable modular 14 system ***NEW***	H 2500	$5.95
Large stackable modular 15 system	H 2494	$9.95

Tool Boxes

Medium Carry Tray ***NEW***	H 2695	$4.95
1 Tray 290 x 130 x 110mm	H 2593	$9.90
2 Tray 325 x 170 x 155mm	H 2594	$17.70
3 Tray 390 x 195 x 195mm	H 2595	$25.50
6 Tray Tool Box ***NEW***	H 2696	$49.95

Extruded Aluminium Heatsink Boxes

Internally slotted to accept PCBs, they're an ideal choice for any project that needs heat dissipation. Their black powder-coated finish gives an ultra-professional look to any project.

L x D x H (mm)	Cat No.	Price
140 x 72 x 32	H 3000	$23.50
140 x 108 x 38*	H 3002	$27.50

*Features sliding top panel (immobile when assembled).

Sloping Cases

VL-94V0 Grey, ideal for audio and test equipment kits.

Small: 134 x 189 x 32 x 55 ***NEW***	H 2914	$11.70
Large: 189 x 134 x 32 x 55 ***NEW***	H 2913	$11.70

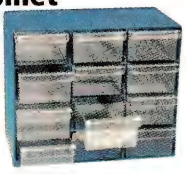
Plastic case with a 1mm thick metal panel.

Small: 190 x 120 x 36 x 65mm	H 2911	$28.50
Large: 260 x 160 x 35 x 80mm	H 2912	$38.50

Virtually Unbreakable Storage Box

Keep all your tools together in this durable plastic storage box. Its small separate compartments allow you to keep different bits and pieces together while it also provides enough space to house your larger tools.
H 2572 **$22.50**

12-Drawer Parts Cabinet



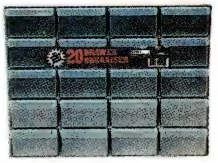
Made in Australia, this solid 12-drawer plastic cabinet provides convenient storage of components and various hardware items. Can be screwed directly onto a wall. Size approx. 230mm x 128mm x 188mm. H 2582** **$14.95**

Small Modular Tilt Drawer

H 2581 **$5.95**

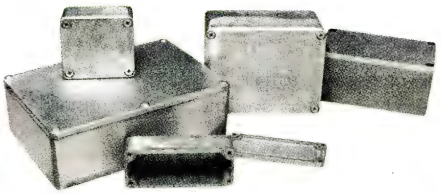
EXCLUSIVE TO POWER HOUSE & direct link

20-Drawer Parts Cabinet



Made in Australia, this solid 20-drawer plastic cabinet provides convenient storage of components and various hardware items. Can be screwed directly onto a wall. Size approx. 305mm x 128mm x 230mm.
H 2587 **$26.95**

**Components pictures in boxes are not included



Sealed Diecast Aluminium Boxes

Ideal for enthusiast outdoor projects that require both weatherproof and RF shielded enclosures, as well as in industrial and commercial applications. These boxes are made from corrosion-resistant diecast aluminium (ADC-10 to Japan Industrial Standard) and feature a recessed neoprene gasket to meet IP65 of IEC529 and NEMA4 (dust and hose-proof) requirements. The wall mounting holes and stainless steel lid fixing screws are also outside the sealing area to prevent the ingress of moisture. Complete with copper-plated ground screw and washer.

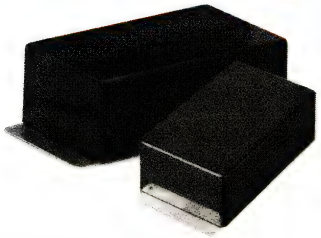
Size (mm) L x W x H	Cat No.	Price
36 x 90 x 30	H 2230	$6.95
64 x 58 x 35	H 2231	$7.95
115 x 65 x 55	H 2233	$14.50
115 x 90 x 55	H 2234	$15.95
171 x 121 x 55	H 2236	$27.50

Powder Coated Sealed Diecast Boxes

Size (mm) L x W x H	Cat No.	Colour	Price
50 x 50 x 21	H 2227	Grey	$8.95
50 x 50 x 21	H 2237*	Black *NEW*	$9.20
90 x 90 x 36	H 2228	Grey	$14.95
90 x 90 x 36	H 2238*	Black *NEW*	$15.20
125 x 125 x 53	H 2229	Grey	$17.95
125 x 125 x 53	H 2239*	Black *NEW*	$18.20

*EXCLUSIVE TO POWER HOUSE & direct link

NEW FOR '99

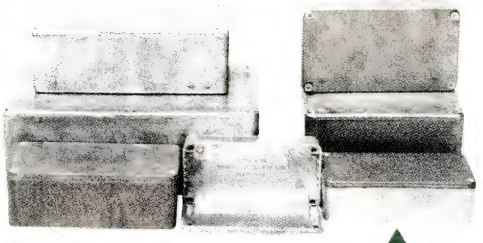


Easy-Mount Boxes

Perfect for automotive applications, the bases of these project boxes have flanges that allow easy fastening to flat surfaces. Has ABS plastic casing and aluminium base.

Size (mm) L x W x H	Cat No.	Price
125 x 40 x 60mm	H 2892*	$4.95
145 x 50 x 85mm	H 2894*	$6.45

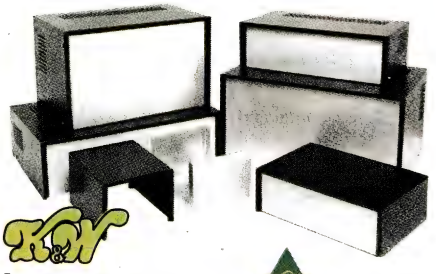
*Limited Stock



Diecast Aluminium Boxes

Ideal for RF projects (the lids form an effective screen) or for projects which are subject to weather (they can easily be made watertight). With channelled walls for easy PCB mounting, they're lightweight and extremely robust. Also ideal for projects involving heat as the case itself makes an excellent heatsink.

Size (mm) L x W x H	Cat No.	Price
100 x 50 x 25	H 2221	$12.95
122 x 66 x 41	H 2211	$14.95
110 x 62 x 31	H 2202	$16.50
120 x 94 x 57	H 2204	$21.50
150 x 80 x 50	H 2206	$25.50
191 x 120 x 65	H 2201	$28.50

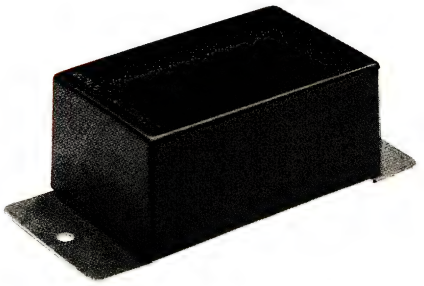


Instrument Cases

Quality Australian made K & W instrument cases. With a steel top, cover and sides plus aluminium base/front/rear. A 5mm recess on the top and sides give the front panel a professional finish. Come with either pressed dimple feet or rubber feet (depending on size).

Front Panel Size: L (-10mm) x H (-5mm)

L x W x H	Vented	Cat No.	Price
100 x 77 x 130	No	H 2804	$18.95
200 x 65 x 130	No	H 2806	$21.95
255 x 77 x 155	Yes	H 2808	$25.95
255 x 150 x 155	Yes	H 2810	$29.95
305 x 90 x 200	Yes	H 2812	$32.95
305 x 150 x 200	Yes	H 2814	$37.95

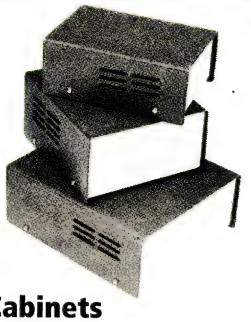


66 x 46 x 30mm Moulded Case

Perfect for small projects. Lid has flange mounts and it comes with matrix-style assembly board. Quality Japanese construction.

H 2765

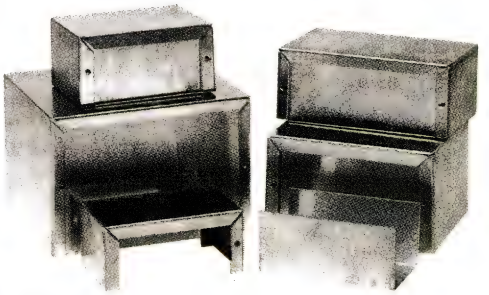
$10.95



Metal Cabinets

Ideal cabinets for projects with meters and controllers which need to be mounted on the front panel. Twin 'U' shape design with metal top & sides and aluminium front/rear/base. The side panels have cooling slots.

Size (mm) L x W x H	Cat No.	Price
100 x 150 x 60	H 2742	$11.95
130 x 150 x 75	H 2743	$14.95
160 x 185 x 70	H 2744	$16.95

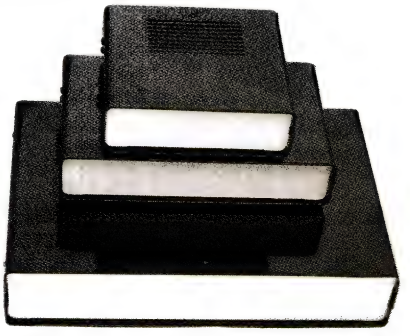


Aluminium Boxes

Economical and easy to work with! A wide range of sizes to suit just about any project. Made in two sections, they come complete with screws.

Size (mm) L x W x H	Cat No.	Price
100 x 60 x 45	H 2305	$8.50
*100 x 70 x 50	H 2300	$9.50
*130 x 75 x 55	H 2325	$10.50
125 x 100 x 75	H 2320	$11.50
150 x 130 x 100	H 2330	$15.95

*Limited Stock

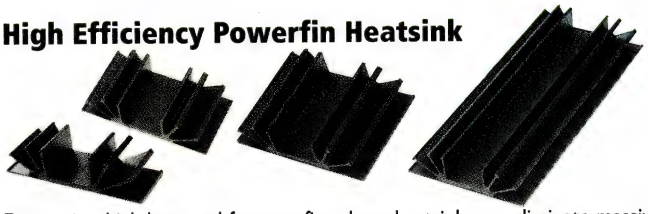


Steel Enclosures

Easy-to-assemble and conforming with the IEC297 standard, these high-quality cases are sturdy and give your projects a professional touch. They pack flat for easy storage and shipping and feature easy-to-modify aluminium front and rear panels.

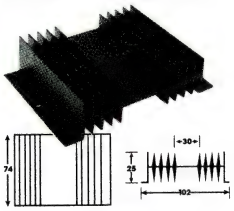
Size (mm) L x W x H	Cat No.	Price
203.2 x 63.5 x 177.8	H 3100	$34.95
304.8 x 63.5 x 177.8	H 3102	$37.95
431.8 x 88.9 x 279.4	H 3110	$64.95

High Efficiency Powerfin Heatsink



Due to its thick base and fan type fins, these heatsinks can dissipate massive amounts of heat. Available in various lengths.

Cat No.	Length	Thermal Resistance	Price (ea)	Price for 10 or more
H 3423	35mm	2.8° C/W	**$5.50**	$5.23
H 3424	52mm	2.5° C/W	**$6.95**	$6.13
H 3422	75mm	2.2° C/W	**$7.95**	$7.55
H 3426	225mm	1.0° C/W	**$17.95**	$17.05



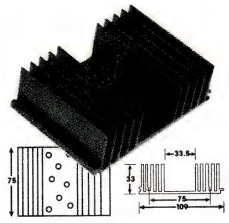
Economy Power Heatsink

Available either un-drilled or pre-drilled. Accepts TO-3, TO-26, To-220 etc.

H 3470 Un-drilled
H 3471 Pre-drilled (2xTO-3) ***Limited stock***
H 3474 Pre-drilled (1xTO-3)

Thermal Resistance: 2.8° C/W **$6.95**

$6.60 for 10 or more



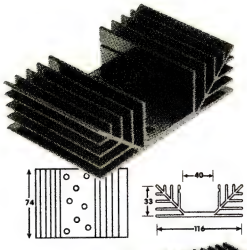
Versatile Heavy Duty Power Heatsink

This ingenious design allows flat horizontal and vertical mounting.

H 3460 Un-drilled
H 3461 Pre-drilled (2xTO-3) ***Limited stock***

Thermal Resistance: 2° C/W **$8.50**

$8.08 for 10 or more



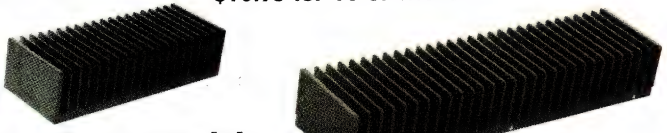
Radial Fin Power Heatsink

The design of this heatsink makes it ideal for efficient heat dissipation over a small area. Pre-drilled (2xTO-3)

Thermal Resistance: 1.9° C/W **$11.50**

H 3485

$10.93 for 10 or more

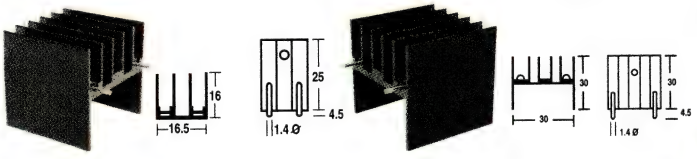


75mm Wide

Heavy Duty Heatsink

Ideal for power amplifier projects.

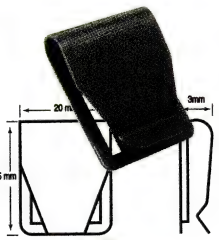
Cat No.	Length	Thermal Resistance	Price (ea)	Price for 10 or more
H 3406	200mm	0.59° C/W	**$19.50**	$18.53
H 3408	300mm	0.40° C/W	**$26.50**	$25.18



PCB Mount Heatsink

Designed to be soldered directly to the tracks with the fins mounted vertically for maximum efficiency. Pre-drilled to take a single flat-pack semiconductor.

Cat No.	Thermal Resistance	Price (ea)	Price for 10 or more
H 3490	18° C/W	**$3.25**	$3.09
H 3495	18° C/W	**$6.45**	$6.13



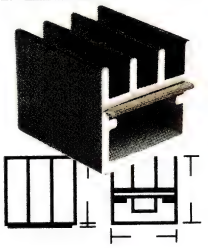
Snap-On TO-220 Cooler Heatsink

Snap-on heatsink to suit TO-220 type transistors, they simply snap-on over the transistor. Install in seconds.

Thermal Resistance: 32° C/W

H 3416

$1.85 for 10 or more **$1.95**



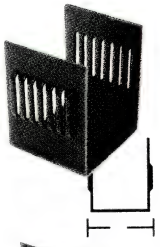
Snap-On TO-126 Cooler Heatsink

Snap-on heatsinks to suit TO-126 type plastic power transistors. Simply snap-on over the transistor. Install in seconds.

Thermal Resistance: 55° C/W

H 3417

$3.09 for 10 or more **$3.25**



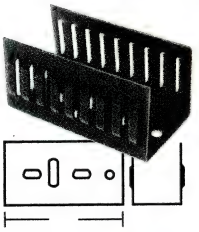
Universal Mini U Heatsink

Suits virtually all flat (plastic type) semiconductors so it is used extensively on PCBs. Vertical flutes provide good thermal efficiency.

Thermal Resistance: 12° C/W **$1.95**

H 3402

$1.85 for 10 or more



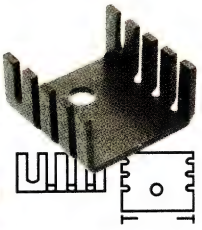
Universal Semi U Heatsink

The universal hole-pattern allows for mounting virtually all 'power' type semiconductors.

Thermal Resistance: 8° C/W

H 3401

$2.47 for 10 or more **$2.60**



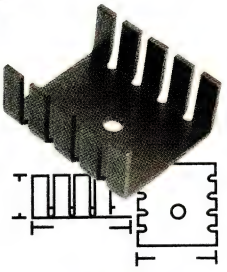
Micro U Heatsink

To suit TO-220 or TO-126 transistors. Constructed from anodised aluminium, its small size ensures it will fit into the tightest places.

Thermal Resistance: 28° C/W

H 3403

90c for 10 or more **95¢**



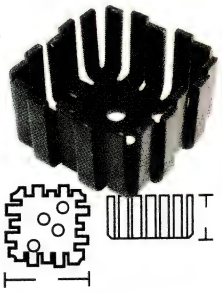
Mini U Heatsink

To suit TO-220 or TO-126 transistors. Constructed from anodised aluminium, its small size ensures it will fit into the tightest places.

Thermal Resistance: 19° C/W

H 3404

$1.57 for 10 or more **$1.65**



TO-3 Powerfin Heatsink

The unique fin design gives a very high air-to-metal ration, giving maximum heat dissipation in a very small space.

Thermal Resistance: 5° C/W

H 3400

$3.56 for 10 or more **$3.75**

Toggle Switches

SPDT Ultraminiature

Rated: 240VAC 1.5A
Mounting: Threaded Bush
Overall size: 8 x 5 x 28mm
Clearance: 14.5mm
Cut out: 5mm
P 7673 **$1.80 for 10 or more**

$2

DPDT Ultraminiature

Rated: 125VAC 3A
Mounting: Threaded Bush
Overall size: 11 x 9 x 28mm
Clearance: 14.5mm
Cut out: 5mm
P 7674 **$2.55 for 10 or more**

$3

SPDT Miniature

Rated: 240VAC @ 2A
Mounting: Threaded Bush
Overall size: 13 x 7 x 33mm
Clearance: 14mm
Cut out: 6.5mm
P 7654 **$1.70 for 10 or more**

$2

DPDT Miniature

Rated: 240VAC 2A
Mounting: Threaded Bush
Overall size: 13 x 12 x 33mm
Clearance: 14.5mm
Cut out: 6.5mm
P 7656 **$2.70 for 10 or more**

$3

DP3T Miniature Centre 'Off'

Rated: 240VAC 2A
Mounting: Threaded Bush
Overall size: 12 x 12 x 35mm
Clearance: 14.5mm
Cut out: 6.5mm
P 7682 **$3.36 for 10 or more**

$3.95

DP3T Miniature Centre 'Off'

Momentary 'On' One Side Only.

Rated: 240VAC 2A
Mounting: Threaded Bush
Overall size: 13 x 12 x 33mm
Clearance: 14.5mm
Cut out: 6.5mm
P 7684 **$3.52 for 10 or more**

$3.95

DP3T Miniature Centre 'Off'

Momentary 'On' Both Sides.

Rated: 240VAC 2A
Mounting: Threaded Bush
Overall size: 13 x 7 x 33mm
Clearance: 14.5mm
Cut out: 6.5mm
P 7689 **$3.56 for 10 or more**

$3.95

4PDT Miniature

Rated: 240VAC 3A
Mounting: Threaded Bush
Overall size: 22 x 13 x 34mm
Clearance: 14.5mm
Cut out: 6.5mm
P 7658 **$6.26 for 10 or more**

$6.95

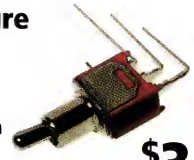
DPDT Miniature Heavy Duty

Rated: 125VAC 10A
Mounting: Threaded Bush
Overall size: 13 x 13 x 36mm
Clearance: 19mm
Cut out: 6mm
P 7652 **$4.42 for 10 or more**

$4.95

SP3T Ultraminiature

Right Angle, On-Off-On.



Rated: 28VDC 3A
Mounting: PCB
Overall size: 8 x 5 x 25mm
Clearance: 15mm
Cut out: 5mm
P 7676 **$2.70 for 10 or more**

$3

SP3T Miniature, Right Angle

Rated: 250VAC 2A
Mounting: PCB
Overall size: 7 x 13 x 35mm
Clearance: 21mm
Cut out: 6.5mm
P 7686 **$3.36 for 10 or more**

$4

Mini Toggle Switch Caps

Pack of five colours.
H 1909

95¢ pk of 5

Weatherproof Hood, Small

Designed for miniature toggle switches.
H 1914
$2.04 for 10 or more

$2.15

Weatherproof Hood, Large

Designed for standard M12 threaded toggle switches.
H 1915
$2.38 for 10 or more

$2.50

SPST Standard

With 'On/Off' Indicator Plate.

Rating: 125VAC 3A
Mounting: Threaded Bush
Overall size: 14 x 27 x 42mm
Clearance: 20.5mm
Cut out: 12mm
P 7668 **$2.17 for 10 or more**

$2.60

DPDT Standard

With 'On/Off' Indicator Plate.

Rating: 125VAC 6A
Mounting: Threaded Bush
Overall size: 18 x 25 x 48mm
Clearance: 26mm
Cut out: 12mm
P 7670
$3.26 for 10 or more

$3.75

DPDT Standard Centre 'Off'

With 'On/Off/On' Plate.

Rating: 250VAC 6A
Mounting: Threaded Bush
Overall size: 19 x 54 x 53mm
Clearance: 28mm
Cut out: 12mm
Terminals: Screw
P 7672 **$3.75 for 10 or more**

$4.50

SPST Standard – Waterproof

Rating: 12VDC 10A
Mounting: Threaded Bush
Overall size: 32 x 18 x 58mm
Clearance: 40mm
Cut out: 12mm
Terminals: Flying Leads
P 7664 Made in Japan **$10.75 for 10 or more**

$11.95

DPDT Miniature Lever Action Paddle

Rating: 250VAC 2A
Mounting: Snap Lock
Overall size: 11.4 x 19.4 x 35mm
Clearance: 19mm
Cut out: 12.7 x 15.2mm
P 7693 *Not available in all stores

$4.40

SPST Illuminated

Contacts: 12VDC 16A
Lamp: 12V
Mounting: Threaded Bush
Overall size: 15 x 25 x 65mm
Clearance: 26mm
Cut out: 12mm
P 7666 **$3.95 for 10 or more**

$4.65

DP3T Standard Centre 'Off'

Momentary 'On' Both Sides.

Rating: 12VDC 20A
Mounting: Threaded Bush
Overall size: 26 x 33 x 65mm
Clearance: 31mm
Cut out: 12mm
P 7650 **$5.36 for 10 or more**

$5.95

Push-Button Switches

Single Pole Miniature – Normally Open

Rating: 125VAC 1A
Mounting: Threaded Bush
Overall size: 28.1 x 9.5mm
Clearance: 17.5mm
Cut out: 7.1mm
Model: MS312
P 7560 Made in Japan

$1.15 ea

Single Pole Miniature – Normally Closed

Rating: 125VAC 1A
Mounting: Threaded Bush
Overall size: 28.1 x 9.5mm
Clearance: 17.5mm
Cut out: 7.1mm
Model: MS313
P 7561 Made in Japan

$1.35 ea

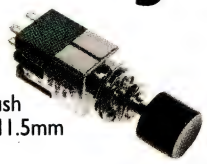
Push Button Switches

SPST Push On/Push Off

Rating: 250VAC 1A
Mounting: Snap Lock
Overall size: 14 x 14 x 28mm
Clearance: 22mm
Cut out: 11 x 12.5mm
Red P 7540
Black P 7542

$3.25

DPDT Alternate Action



Rating: 125VAC 3A
Mounting: Threaded Bush
Overall size: 41.5 x 11 x 11.5mm
Clearance: 25.5mm
Cut out: 6mm
Model: MS197
P 7564 Made in Japan

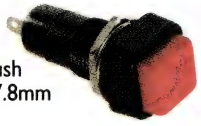
$6.60

DPDT Momentary 'On'

Rating: 125VAC 3A
Mounting: Threaded Bush
Overall size: 41.5 x 13 x 13mm
Clearance: 26.1mm
Cut out: 6mm
Model: MS300
P 7574 Made in Japan

$6.60

Single Pole (SP)

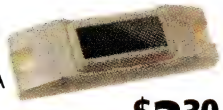


Rating: 250VAC 3A
Mounting: Threaded Bush
Overall size: 15 x 15 x 37.8mm
Clearance: 27.3mm
Cut out: 12mm
Terminals: Solder Tags
Push on/Push off P 7566
Momentary Push 'On' P 7568

$2.20

Door Bell/Emergency Button

With Blank Plate



Switching: Momentary 'On'
Rating: 125VAC 3A
Mounting: Screw
Overall size: 23 x 77mm
Terminals: Screw
P 7554

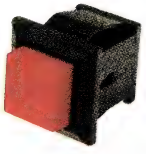
$3.30

SPDT Illuminated Momentary

Lamp: 12-14V Wedge (P 8157)
Switch: 240VAC 10A
Action: Momentary 'On'/'Off'
Fascia: 35mm Square
Mounting: Threaded Bush
Cut out: 24.5mm
Clearance: 56.2mm
Red P 7591
Green P 7593

$12.95

SP Momentary Push 'On'



Rating: 240VAC 1A
Mounting: Snap Lock
Overall size: 14 x 14 x 24.5mm
Clearance: 19.5mm
Cut out: 11 x 12.5mm
Red P 7552
Blue P 7550

$2.20

SP Momentary Push 'On'

Rating: 35VDC 10mA
Mounting: PCB
Pin size: 0.88 Square
Pin spacing: On 5mm Square
Cut out: 8mm Square
Single Black P 7572 **$1.20**
Pack of 4 colours P 7542 **$4.40**
One each of red, black, yellow and white.

SPDT Illuminated Soft Touch

Contacts: 250VAC 1A
Lamp: 12V 55mA T1 Bipin
Mounting: Threaded Bush
Cut out: 12mm
Clearance: 40mm
Red P 7580
Blue P 7582
Green P 7584
Yellow P 7586

2=Common Switched
1=Normally Closed
3=Normally Open
Bottom View +-=12V Incandescent Lamp, Unswitched

$12.95

SPST Lamp Switch

Rating: 240VAC 6A
Mounting: Threaded Bush
Overall size: 13 x 23 x 29mm
Cut out: 10mm
Terminals: Screw
P 7874

$2

DPDT Lamp Switch

Rating: 240VAC 2A/Pole
Mounting: Threaded Bush
Overall size: 13 x 23 x 33mm
Cut out: 10mm
Terminals: Screw
P 7876

$3

SP Pull On/Push Off

Rating: 24VDC 10A
Mounting: Threaded Bush
Overall size: 50 x 19mm
Clearance: 35.5mm
Cut out: 10mm
Terminals: Screw
P 7562 Made in Japan

$7.65

SP Pull On/Push Off

Common Ground

Rating: 12VDC 5A
Mounting: Threaded Bush
Overall size: 30 x 22.5 x 42.4mm
Clearance: 21.6mm
Cut out: 7.85mm
Terminals: Screw
P 7563

$4.95

SPDT Momentary 'On'

Ultra Miniature!

Rating: 120VAC 1A
Mounting: Threaded Bush
Overall size: 9 x 5 x 18mm
Clearance: 14.5mm
Cut out: 5mm
P 7559

$3.25

SPST Momentary 'On'

Extra Small!

Rating: 120VAC 0.5A
Mounting: Threaded Bush/PCB
Overall size: 7 x 20.6mm
Clearance: 13mm
Cut out: 5mm
Pin size: 1mm
P 7558 Made in Japan

$2.20

Slide Switches

DPDT Miniature

Rating: 50VDC 0.5A
Mounting: 2 x M2 Screw Holes
Overall size: 23 x 8 x 19mm
Clearance: 12mm
Cut out: 9 x 4.5mm
P 7610

95¢

DPDT Miniature Red

Rating: 50VDC 0.5A
Mounting: 2 x M2 Screw Holes
Overall size: 23 x 8 x 19mm
Clearance: 12mm
Cut out: 9 x 4.5mm
P 7612

95¢

DPDT Sub-miniature

Rating: 125VAC 0.5A
Mounting: 2 x 6BA Screw Holes
Overall size: 35 x 13 x 26mm
Clearance: 13mm
Cut out: 6 x 13mm
P 7616

$1.35

DP3T Miniature

Rating: 50VDC 0.5A
Mounting: 2 x M2 Screw Holes
Overall size: 24x 8 x 21mm
Clearance: 12mm
Cut out: 5 x 12mm
P 7614

$1.35

3P3T Sub-miniature

Rating: 30VDC 0.3A
Mounting: 2 x M2.5 Screw Holes
Overall size: 25 x 10.5 x 27mm
Clearance: 15mm
Cut out: 6 x 12mm
P 7622

$2

SPDT PCB Mount

Rating: 26VDC 6A
Mounting: PCB
Overall size: 13 x 7 x 18mm
Clearance: 13mm
Cut out: 4 x 8 mm
P 7602

$3

DPDT PCB Mount

Rating: 240VAC 2A
Mounting: PCB
Overall size: 12.8 x 11.3 x 14.3mm
Clearance: 9.4mm
Cut out: 3.9 x 6.1mm
P 7600

$3.35

Rocker Switches SPST Illuminated

Rating: 250VAC 6A
Overall size: 15 x 20 x 25mm
Clearance: 22mm
Cut out: 12.9 x 19.2mm
Mounting: Snap Lock
P 7703
$4

Rating: 240VAC 15A
Illumination: 240V Neon
Overall size: 14 x 29.8 x 41.2mm
Clearance: 33.3mm
Cut out: 11.5 x 28.4mm
Mounting: Snap Lock
P 7705
$4

Rating: 250VAC 15A
Illumination: 12V Lamp
Bracket size: 35 x 41mm
Switch cutout: 13.5 x 29m
Mounting bracket: Screw
Clearance: 25mm
P 7702
$3.95

Rating: 12VDC 30A
Illumination: 12V Lamp
Overall size: 30.6 x 19.2 x 44.72mm
Cut out: 12 x 10.8mm
Clearance: 35.5mm
Mounting: Threaded Bush
Red P 7723 **Green** P 7726
$4.95

DPST Illuminated

Rating: 240VAC 15A
Illumination: 240V Neon
Overall size: 22.73 x 30.35 x 33mm
Clearance: 31mm
Cut out: 27.2 x 22.1mm
Mounting: Snap Lock
P 7707
$5

Rating: 250VAC 10A
Illumination: 240V Neon
Overall size: 25.2 x 31.5 x 30.7mm
Clearance: 21.4mm
Cut out: 27.2 x 22mm
Mounting: Snap Lock
Red P 7709 **Green** P 7710
$4.50

SPST Non-Illuminated

Rating: 240VAC 6A
Overall size: 23.2 x 23.2 x 26.8mm
Clearance: 24mm
Cut out: 18mm
Mounting: Panel Lock Nut
P 7699
$3.30

Rating: 12VDC 2A
Overall size: 15.5 x 21 x 23.5mm
Clearance: 17.5mm
Cut out: 13 x 19 mm
Mounting: Snap Lock
P 7700
$2.20

DPDT 12V Illuminated

Rating: 240VAC 10A
Illumination: 12V Lamp
Overall size: 23 x 30.5 x 33mm
Clearance: 30mm
Cut out: 27 x 22mm
Mounting: Snap Lock P 7708
$5

SPDT Non-Illuminated

Rating: 240VAC 6A
Flange diameter: 22.95mm
Round clearance: 23.8mm
Cut out: 19.48mm
Mounting: Snap Lock P 7701
$3.95

DPDT Non-Illuminated

Rating: 240VAC 6A
Flange diameter: 22.9mm
Round clearance: 21mm
Cut out: 17mm
Mounting: Panel Lock Nut P 7725
$3.95

Rating: 250VAC 3A
Overall size: 20 x 30 x 30.7mm
Clearance: 15.7mm
Cut out: 17mm
Mounting: Panel Lock Nut
P 7720
$3.35

Switching: Momentary "ON"
Both sides center return OFF
Rating: 250VAC 5A
Overall size: 44 x 25 x 46mm
Cut out: 34 x 20mm
Clearance: 40mm
Mounting: Snap Lock
P 7730
$6.50

Miscellaneous Switches

Numeric Keypad
Switching: Matrix Scan
Overall size: 51 x 64 x 11.5mm
Cut out: 46 x 59mm
Clearance: 8.2mm
Mounting: Screws
Circuit Diagram Included
P 7810
$6.95

DPDT 4-Way Switch Bank
Rating: 100VAC 0.5A / 25VDC 1A
Switch action: Push Button 1 On x 3 Off
Cut out: 11mm Holes @ 17.5mm Centres
Clearance: 25mm
Mounting: Screw/PCB
P 7750
$6.50

DPDT Single
Rating: 100VAC 0.5A/25VDC 1A
Switch action: Push Button
Cut out: 11mm Diameter
Clearance: 25mm
Mounting: Screw/PCB
P 7752
$2.20

4-Way SPST PCB DIP
Rating: 24VDC 50mA
(Make & Break)
50VDC 100mA (Steady)
Overall size: 11 x 10 x 5mm
Mounting: PCB
P 7851
$2

8-Way SPST PCB DIP
Rating: 24VDC 50mA
Overall size: 22 x 16 x 10mm
Mounting: PCB
P 7854
$2.95

DPDT Knife Switch
Rating: 50VDC
Overall size: 43 x 79 x 20mm
Body size: 43 x 60 x 6mm
Terminals: Screw
Made in Japan
P 7862
$4.95

SPDT Micro
Rating: 250VAC 10A
Overall size: 38 x 21 x 10mm
Mounting: Screw
P 7800
$3

SPDT Mini Micro
Rating: 125VAC 3A
Overall size: 20 x 15 x 7mm
Mounting: Screw
P 7802
$2

Thermostat Switches
Electrical: 240VAC 6A
Screw holes: 3.5mm
Hole spacing:
23.8mm Centers
Cut out: 17.5mm
N.O.60°C P 8250
Clearance: 13mm
N.C.80°C P 8260
$3.95 ea

Alarm Switches

Mini Reed Switches
Rating: 200VDC 0.5A
Glass size: 12.7mm x 1.8mm
Switch: Normally closed
(with Magnet)
P 7856
$1.50

Bar Magnet
Overall size: 26 x 8 x 8mm
Operation distance: 10mm
From above reed switch
L 5214
$2.15

Mercury 'Tilt' Switch
Rating: 24VDC 2A
Glass size: 25 x 6mm
(approx)
P 7860
$2.40

10 Up prices not shown. Please ask our sales staff for details on bulk purchase savings

Audio Plugs & Sockets

2.5mm

Description	Cat No.	Price
Plug MONO line plastic shell	P 1125	$0.75
Plug STEREO line plastic shell	P 1127	$1.95
Socket MONO line plastic shell	P 1232	$0.95
Socket MONO panel mount	P 1220	$0.75
Socket STEREO panel tubular shell	P 1222	$2.00

3.5mm

Description	Cat No.	Price
Plug STEREO line, gold flashed	P 1147	$2.95
Plug MONO line metal shell	P 1136	$1.45
Plug STEREO line plastic shell black	P 1140	$1.35
Plug MONO line plastic shell red	P 1132	$0.75
Plug MONO line plastic shell black	P 1134	$0.75
Socket STEREO line plastic black	P 1238	$1.60
Socket MONO line plastic shell red	P 1234	$0.95
Socket MONO line plastic shell black	P 1236	$0.95
Socket MONO panel mount	P 1231	$0.85
Socket STEREO panel tubular shell	P 1240	$1.95
Socket STEREO PCB/panel SPST	P 1245	$2.00
Socket STEREO PCB/panel DPST	P 1247	$2.40

6.5mm

Description	Cat No.	Price
Plug STEREO line metal shell	P 1168	$2.20
Plug MONO line metal shell	P 1162	$1.85
Plug STEREO line plastic shell black	P 1166	$1.50
Plug MONO line plastic shell black	P 1160	$1.35
Plug MONO right angle nickel	P 1170	$1.75
Socket STEREO line plastic black	P 1286	$1.80
Socket MONO line plastic black	P 1264	$1.65
Socket MONO panel mount SPST	P 1261	$1.50
Socket STEREO panel open case	P 1266	$2.00
Socket STEREO DPST enclosed metal	P 1298	$2.75
Socket STEREO DPST enclosed case Plastic/Isolated	P 1296	$2.75

RCA Plugs & Sockets

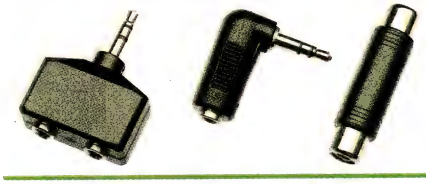
Description	Cat No.	Price
Plug line metal shell red cable relief	P 1424	$2.00
Plug line metal shell black cable relief	P 1426	$2.00
Plug line plastic shell red	P 1420	$0.70
Plug line plastic shell white	P 1421	$0.70
Plug line plastic shell black	P 1422	$0.70
Plug line plastic shell yellow	P 1423	$0.70
Socket line plastic shell red	P 1410	$0.70
Socket line plastic shell black	P 1412	$0.70
Socket panel threaded bush mount	P 1430	$0.95
Socket panel round flange, small	P 1441	$0.75
Socket panel 2-way rect flange nickel	P 1443	$1.25
Socket panel 2-way rect flange gold	P 1450	$1.80
Socket panel 4-way rect flange gold	P 1453	$2.95
Socket panel 6-way rect flange gold	P 1454	$3.95
Socket PCB mount, right angle	P 1435	$0.95

Gold Series

Description	Cat No.	Price
RCA plug, red band	P 1425	$3.40
RCA plug, black band	P 1427	$3.40
RCA socket, red band	P 1411	$2.40
RCA socket, black band	P 1413	$2.40
RCA panel bulkhead, red band	P 1431	$4.95
RCA panel bulkhead, black band	P 1432	$4.95
6.5mm STEREO plug	P 1167	$4.00
6.5mm MONO plug	P 1163	$3.65
6.5mm MONO right angle plug	P 1164	$4.95

Adaptors – Audio/Video

Description	Cat No.	Price
2.5mm plug MONO – 3.5mm ST skt	P 6515	$2.00
3.5mm plug ST – 2 x 3.5mm ST skt	P 6525	$3.95
3.5mm plug ST – 3.5mmST skt R/A	P 6620	$4.95
3.5mm plug MONO – 3.5mm ST skt	P 6600	$2.00
3.5mm plug MONO – 2 x 3.5mm ST skt	P 6527	$3.95
3.5mm plug MONO – RCA socket	P 6560	$2.00
3.5mm plug MONO – 6.6mm MONO skt	P 6510	$2.00
3.5mm plug MONO – 6.5mm ST socket	P 6570	$2.00
3.5mm plug ST – 6.5mm ST socket	P 6505	$2.00
6.5mm plug ST – 3.5mm ST skt R/A	P 6625	$4.00
6.5mm plug ST – 3.5mm ST socket	P 6500	$2.00
6.5mm plug MONO – 3.5mm ST skt	P 6502	$2.00
6.5mm plug MONO – 3.5mm MONO skt	P 6520	$2.00
6.5mm plug MONO – 6.5mm ST skt	P 6580	$2.00
6.5mm plug MONO – RCA socket	P 6530	$2.00
RCA plug – 3.5mm MONO socket	P 6540	$2.00
RCA plug – 6.5mm MONO socket	P 6550	$2.00
RCA plug – RCA plug	P 6614	$2.00
RCA plug – 2 x RCA sockets	P 6610	$4.00
RCA plug – 2 x RCA skts, gold flashed	P 6612	$5.95
RCA socket – RCA socket	P 6565	$2.00
2 x RCA skts – 2 x RCA sockets	P 6567	$3.95
3 x RCA skts – 3 x RCA sockets, gold	P 6568	$5.95



Adaptors – Video/RF

Description	Cat No.	Price
RCA plug – UHF S0239 socket	P 1455	$3.95
RCA socket – UHF PL259 plug	P 6562	$3.95
BNC plug – UHF S0239 socket	P 2230	$5.00
BNC plug – RCA socket	P 2250	$4.00
UHF PL259 plug – BNC socket	P 2240	$5.00
UHF PL259 plug – 2 x S0239 T-junction	P 2384	$8.95
UHF S0239 skt – UHF PL259 plug R/A	P 2382	$8.95
UHF S0239 socket – S0239 socket	P 2380	$3.95
N plug – S0239 skt silver plated	P 2415	$9.95
N plug – BNC socket silver plated	P 2417	$9.85
N socket – N socket, silver plated	P 2420	$9.85

Description	Cat No.	Price
3.5mm MONO plug – 75Ohm skt	P 2035	$3.85
"F29" plug – 75Ohm socket	P 2037	$3.00
"F29" socket – 75Ohm plug	P 2036	$3.00

skt = socket, ST = Stereo, R/A = Right angled

DIN Connectors

Description	Cat No.	Price
4-pin mini DIN plug line	P 1482	$3.95
4-pin mini DIN socket, panel	P 1500	$3.95
2-pin DIN plug line	P 1520	$0.85
2-pin DIN socket line	P 1524	$1.00
2-pin DIN socket panel mount	P 1523	$0.70
3-pin DIN plug line	P 1530	$0.95
5-pin DIN plug line	P 1550	$1.10
5-pin DIN socket, line	P 1554	$1.40
5-pin DIN socket panel mount	P 1552	$1.45
6-pin DIN plug line	P 1560	$1.60
6-pin DIN socket line	P 1564	$1.75
6-pin DIN socket panel mount	P 1562	$1.75
7-pin DIN plug line	P 1561	$1.75
7-pin DIN socket line	P 1563	$2.00
7-pin DIN socket panel mount	P 1565	$2.20
8-pin DIN plug line	P 1571	$2.00
8-pin DIN socket line	P 1573	$2.00
8-pin DIN socket panel mount	P 1575	$2.25
13-pin DIN plug line	P 1569	$3.50

Amphenol (Cannon)

Designed in Australia

Low Level Audio *Solder Terminals*

Description	Cat No.	Price
Plug 3-pin line all plastic shell	P 1609	$3.95
Socket 3-pin line all plastic shell	P 1612	$3.95
Plug 3-pin line half shell metal	P 1623	$4.95
Socket 3-pin line half shell metal	P 1621	$4.95
Plug 3-pin panel mount metal	P 1622	$4.25
Socket 3-pin panel mount metal	P 1626	$5.95
Plug 3-pin panel mount plastic	P 1610	$3.95
Socket 3-pin panel mount plastic	P 1612	$3.95

IDC Terminals

Description	Cat No.	Price
Plug 3-pin line half-shell metal	P 1607	$5.95
Socket 3-pin line half-shell metal	P 1608	$5.95

Note: Dick Smith Electronics is an authorised Amphenol (Cannon) connector distributor. All manufacturers enquiries are welcomed.

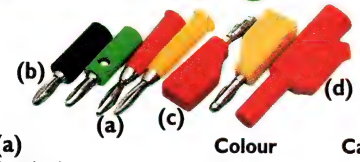
10 Up prices not shown? Please ask our sales staff for details on bulk purchase savings.

Micro Connectors 2mm

	Colour	Cat No.
2mm Micro Plug	Red	P 1752
2mm Micro Plug	Black	P 1750
2mm Micro Plug	Green	P 1749
2mm Micro Socket	Red	P 1758
2mm Micro Socket	Black	P 1756
2mm Micro Socket	Green	P 1757

$1.10

Banana Plugs 4mm



(a)	Colour	Cat No.
Standard	Red	P 1710
Standard	Black	P 1712
Standard	Yellow	P 1714
Standard	Green	P 1716

85¢

(b)	Colour	Cat No.
Right Angle Piggy Back	Red	P 1740
Right Angle Piggy Back	Black	P 1741
Right Angle Piggy Back	Yellow	P 1742
Right Angle Piggy Back	Green	P 1743

$1.55

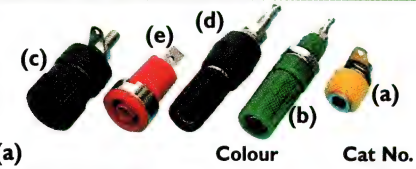
(c)	Colour	Cat No.
High Quality Piggy Back	Red	P 1711
High Quality Piggy Back	Black	P 1713
High Quality Piggy Back	Yellow	P 1715
High Quality Piggy Back	Green	P 1717
High Quality Piggy Back	Blue	P 1718
High Quality Piggy Back	White	P 1719

$1.95

(d)	Colour	Cat No.
Safety HQ Piggy Back	Red	P 1700
Safety HQ Piggy Back	Black	P 1702

$2.20

Banana Sockets 4mm



(a)	Colour	Cat No.
Standard Low Profile	Red	P 1720
Standard Low Profile	Black	P 1722
Standard Low Profile	Yellow	P 1724
Standard Low Profile	Green	P 1726

85¢

(b)	Colour	Cat No.
Standard w. Binding Post	Red	P 1730
Standard w. Binding Post	Black	P 1732
Standard w. Binding Post	Yellow	P 1734
Standard w. Binding Post	Green	P 1736

$1.65

(c)	Colour	Cat No.
Large with Binding Post	Red	P 1731
Large with Binding Post	Black	P 1733

$1.95

(d)	Colour	Cat No.
High Quality w. Binding Post	Red	P 1737
High Quality w. Binding Post	Black	P 1738

$2.20

(e)	Colour	Cat No.
Safety Fingerproof Recessed	Red	P 1728
Safety Fingerproof Recessed	Black	P 1729

$1.50

DC Power Connectors & Adaptors

Plug

Cat No.	Type	Price
P 1643	1.3mm Line Solder Terminals	$1.40
P 1641	2.1mm Line Short Shaft	$1.20
P 1642	2.1mm Line Long Shaft	$1.20
P 1645	2.5mm Line Short Shaft	$1.20
P 1646	2.5mm Line Long Shaft	$1.20

Socket

P 1661	2.1mm Panel Rectangular	$1.60
P 1648	2.1mm Panel Switch Round	$2.20
P 1653	2.1mm Line	$2.20
P 1666	2.5mm Panel Rectangular	$1.60
P 1650	2.5mm Panel Switch Round	$2.20
P 1655	2.5mm Line	$2.20

Adaptors

P 6591	1.3mm Plug to 2.1mm Socket	$2.00
P 6595	2.5mm Plug to 3.5mm Socket	$2.00

Automotive

Adaptors

Cat No.	Type	Price
P 1678	Twin Lighter Socket 5A Fuse	$6.95
P 1686	Twin Lighter Socket 10A Fuse	$14.95

Extension Leads

P 1682	2m Plug Lead w 4-Way DC Plugs	$8.95
P 1683	4m Plug Lead w 6 DC Plugs	$16.95
P 1681	2.8m Plug Lead w Cig Socket	$12.95

Plugs and Sockets

P 1675	Cig Lighter Plug, Standard	$1.40
P 1684	Cig Plug w 5A Fuse & LED	$3.95
P 1677	Line Socket, Solder	$2.40
P 1679	Panel Socket Illuminated Inc Lighter	$5.95

RF

UHF Plugs

Cat No.	Type	Price
P 2310	PL259 Line RG8U Solder	$3.25
P 2311	PL259 Line RG58R/U Solder	$3.25
P 2313	PL259 Line RG58R/U Crimp	$3.00

UHF S0239 Sockets

P 2342	Panel Mount Single Hole	$3.95
P 2340	Panel Mount with Square Flange	$3.15
P 2320	Line Socket, Solder Terminals	$8.75

UHF Adaptors

P 2360	PL259 Reducer suit P 2310	$1.00
P 2384	PL259 to 2 x S0239 T-Junction	$8.95
P 2382	PL259 to S0239 Right Angle	$8.95
P 2380	S0239 to S0239	$3.95
P 6562	PL259 Plug to RCA Socket	$3.95
P 1455	S0239 Socket to RCA Plug	$3.95

BNC Plugs

Cat No.	Type	Price
P 2210	Line suit RG58R/U Solder	$3.00
P 2211	Line suit RG58R/U Crimp	$3.00
P 2212	Line suit RG58/59 Screw	$4.00

BNC Sockets

Cat No.	Type	Price
P 2220	Panel Mount Common Ground	$3.00
P 2215	Panel Mount Isolated Ground	$4.00
P 2225	Line suit RG58/59, Screw	$3.95

N Type Plugs

Cat No.	Type	Price
P 2400	Line suit RG213U Silver Plated	$10.00
P 2401	Line suit RG58R/U Silver Plated	$10.00

N Type Socket

P 2410	Panel w Flange, Silver Plated	$5.50

N Type Adaptors

P 2415	N Plug to S0239 Silver Plated	$9.95
P 2417	N Plug to BNC Skt Nickel	$9.85
P 2420	N Socket to N Socket	$9.85

Computer

Power Connector

Pack of Male & Female Connectors plus pins. Suit 5 1/4" Floppy and Hard Drives, Fans, etc. Power Rating: 250VAC 10A * Replacement Pins available – P 5100

P 5120

$3.25 a set

Sub D Connectors

9 Pin

Plug, IDC Flat Ribbon	P 2699	$7.00
Socket, IDC Flat Ribbon	P 2700	$7.00
Socket, Right Angle PCB Mount	P 2683	$4.00
Plug, Solder Tail	P 2684	$3.00
Socket, Solder Tail	P 2685	$3.60
Backshell, with Thumbscrews	P 2686	$2.50

15 Pin

Plug, IDC Flat Ribbon	P 2701	$7.55
Socket, IDC Flat Ribbon	P 2702	$7.55
Plug, High Density Sub D	P 2710	$3.95
Socket, High Density Sub D	P 2711	$3.95
Plug, Solder Tail	P 2688	$3.60
Socket, Solder Tail	P 2688	$4.00
Backshell, with Standard Lockscrews	P 2689	$2.80

Sub-D Connectors

23-pin		
Plug, solder tail	P 2696	$4.00
Socket, solder tail	P 2697	$4.00
Backshell with standard lockscrews	P 2698	$3.10
25-pin		
Plug, IDC flat ribbon	P 2693	$8.00
Socket, IDC flat ribbon	P 2694	$8.00
Socket, right angle PCB mount	P 2695	$7.00
Plug, solder tail	P 2690	$2.95
Socket, solder tail	P 2691	$2.95
Backshell with thumbscrews	P 2692	$2.95

Accessories

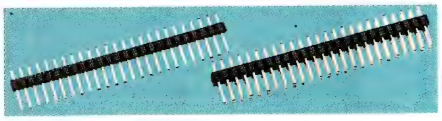
Hex extension nuts, 2 pce pack	P 2724	$0.95
Hex sockets, 2 pce pack	P 2725	$1.10

36 Way Centronics Parallel

Plug, line solder terminals	P 2680	$6.95
Socket, panel with bail locks	P 2681	$7.70

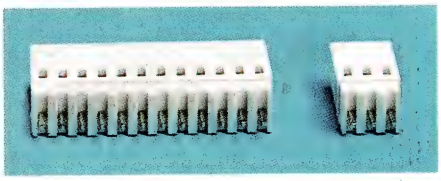
IDC Crimp on Sockets

16 way DIL, gold flashed	P 2744	$3.00
20 way DIL, gold flashed	P 2746	$3.15
26 way DIL, gold flashed	P 2748	$3.30
34 way DIL, gold flashed	P 2750	$3.60
40 way DIL, gold flashed	P 2752	$4.00
50 way DIL, gold flashed	P 2754	$5.00
34 way IDC edge card socket	P 2760	$3.40



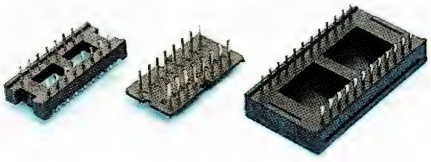
Snap Off Pin Headers

25 way SIL, gold flashed	P 2726	$3.00
50 way DIL, gold flashed	P 2728	$4.00



Locking Pin/Plug Headers

2 way jumper shunts, gold flashed, 5 piece pack	P 2730	$2.30
2 way SIL pin header & plug	P 2731	$1.00
3 way SIL pin header & plug	P 2733	$1.15
12 way SIL pin header & plug	P 2735	$3.00



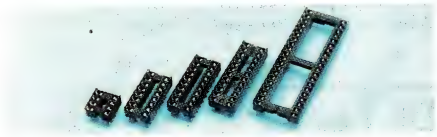
IC Plugs/Component Headers

16 pin IDC DIL plug	P 4162	$1.85
24 pin IDC DIL plug	P 4242	$2.75
14 pin DIL header plug solder	P 4144	$3.55
16 pin DIL header plug solder	P 4164	$3.80

** Not available in all stores*

IC Sockets Dual Wipe Contacts

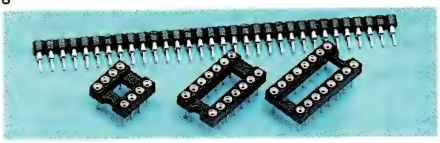
8 pin DIL	P 4080	$0.25
14 pin DIL	P 4140	$0.35
16 pin DIL	P 4160	$0.40
18 pin DIL	P 4180	$0.45
20 pin DIL	P 4200	$0.50
22 pin DIL	P 4220	$0.55
24 pin DIL	P 4240	$0.70
28 pin DIL	P 4245	$0.75
40 pin DIL	P 4250	$0.80
100 Pce IC socket pins	P 4504	$6.95



Machine Pin IC Sockets

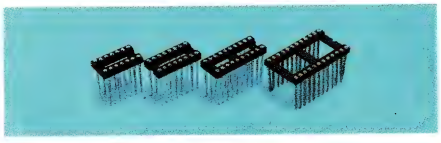
Anti-solder wicking

8 pin DIL, gold flashed	P 4081	$1.15
14 pin DIL, gold flashed	P 4141	$1.55
16 pin DIL, gold flashed	P 4161	$1.80
32 pin SIL, snap-off strip, gold flashed	P 4300	$3.95



Wirewrap Machine Pin IC Sockets

14 pin DIL	P 4260	$3.00
16 pin DIL	P 4262	$3.50
20 pin DIL	P 4264	$3.80
24 pin DIL	P 4268	$3.95



Transistor & Crystal Sockets

Type	Cat No.	Price
TO3*	P 4023	$2.95
TO5*	P 4015	$0.95
TO18*	P 4018	$0.95
8 pin universal round*	P 4020	$1.95
HC49U crystal type K	P 4720	$1.10

Nylon Plugs & Sockets

High quality connectors supplied with (M)ale and (F)emale pins

Pin No.	Max Ratings	Cat No.	Price
2 way	300V 15A	P 5102	$2.45
3 way	300V 14A	P 5103	$2.95
4 way	300V 13A	P 5105	$3.65
6 way	300V 12A	P 5106	$3.95
9 way	300V 10A	P 5109	$4.95
12 way	300V 9A	P 5112	$5.45
15 way	300V 8A	P 5115	$5.65

6M & 6F replacement pins	P 5100	$3.30

Suit P 5102 to P 5115 and P 5120 connectors

Octal Valve Connectors

250V AC 5A – Made in Japan

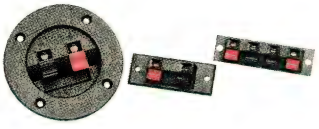
Type	Cat No.	Price
8 pin line plug	P 3010	$4.50
8 pin chassis socket	P 3025	$4.50

Microphone Connectors

Pin No.	Cat No.	Price
2 pole plug, panel mount	P 1820	$4.00
2 pole socket, line	P 1832	$4.00
4 pole plug, panel mount	P 1824	$4.00
4 pole socket, line	P 1834	$4.00
8 pole plug, panel mount	P 1826	$6.00
8 pole socket, line	P 1836	$6.00

Tag Strip Terminals

Pin No.	Cat No.	Price
3 way tag/lug	P 4800	$0.35
5 way tag/lug	P 4802	$0.50
7 way tag/lug	P 4804	$0.70



Captive Speaker Terminals

Pin No.	Cat No.	Price
2 pole round, 75mm diam.	P 1763	$2.95
2 pole rect. 55 x 20mm	P 1764	$1.70
4 pole rect. 64 x 17mm	P 1765	$2.95

Barrier Terminals

Screw/solder 250V AC 15A

Pin No.	Cat No.	Price
4 pole	P 4810	$4.40
8 pole	P 4812	$6.95
12 pole	P 4814	$9.95

Terminal Blocks PCB Mount

300V AC 10A

2 pole, 5mm LS	P 4818	$1.30
3 pole, 5mm LS	P 4822	$1.50
3 pole, 10mm LS	P 4834	$1.50

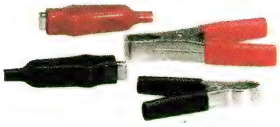
12-Pole Terminal Blocks

300V 10A, large	P 4850	$1.95
300V 10A, small	P 4855	$1.95

Screw Terminal Strips

For speakers, amplifiers, AM/SW antennas, etc

Type	Cat No.	Price
2 pole, 45mm x 17.5mm	P 4860	$1.30
4 pole, 70mm x 17.5mm	P 4862	$2.00
8 pole, 97mm x 17.5mm	P 4864	$3.00



Battery Clips

Crocodile Clips	Cat No.	Price
20A Red shrouded	P 6416	$2.00
20A Black shrouded	P 6418	$2.00
30A Red economy	P 6420	$1.50
30A Black economy	P 6422	$1.50
50A Red large	P 6424	$2.00
50A Black large	P 6426	$2.00

Alligator Clips

Type	Cat No.	Price
Mini red insulated	P 6400	$0.70
Mini black insulated	P 6402	$0.70
Mini green insulated	P 6403	$0.70
Medium red insulated	P 6404	$0.80
Medium black insulated	P 6406	$0.80
Clip to Banana Socket		
Red	P 6408	$1.65
Black	P 6410	$1.65

Test Clips

Type	Cat No.	Price
Mini hook, red	P 6452	$1.40
Mini hook, black	P 6450	$1.40
Medium hook, red	P 6454	$1.50
Medium hook, black	P 6456	$1.50
Large hook, red	P 6458	$4.00
Large hook, black	P 6460	$4.00
16-Pin DIL IC peg style	P 6470	$14.25

Motors and Gears

Gearbox Kit with Motor

Overall Size: 110mm (shaft) x 53mm x 30mm (gearbox)
Motor Voltage: 1.5 – 4.5VDC
Current: 0.2 – 0.8nA
Output Shaft: 3mm diameter
No. of Gears: 7
Provides 6 different ratios and 18 different speeds
P 9020

$19.95

Gearbox Kit Accessories

Set of 7 Pieces

Replacements, spares or use for further speed reduction of the Gearbox Kit with motor.
P 9030

$12.95

Worm Drive Set

Changes drive direction at right angles with Worm and 40 Tooth Gear.
P 9034

$7.95

Spur Gear Set

Consists of 1 of each 10, 20 and 40 Tooth Gears for speed reduction. 2.9mm Centre Bore Hole.
P 9032

$8.95

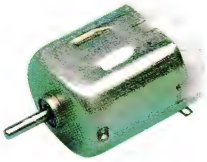
18 Piece Mixed Nylon Gear Pack

Worm, Spindle, Reduction, Spur, Drive, etc. Suits P 9000 and P 9002 DC Motors.
P 9040

$5.95

DC Motors

Low Speed, Low Torque



- Voltage: 3 – 12VDC
- Nominal: 3VDC
- Current: 0.07A*
- Speed: 3,600RPM*
- Torque: 3.07g-cm
- Shaft: 8.1 (l) x 2mm (d)
- Overall: 25 (l) x 20mm (d)

P 9000

$1.45

Medium Speed, Medium Torque

- Voltage: 1.5 – 3VDC
- Current: 0.35A*
- Speed: 13,800RPM*
- Torque: 18.6g-cm
- Shaft: 6.5mm (l) x 2mm (d)
- Overall: 26.5 (l) x 23.6mm (d)

P 9002

$2

High Speed, High Torque

- Voltage: 6 – 12VDC
- Current: 0.3A*
- Speed: 18,400RPM*
- Torque: 69.2g-cm
- Shaft: 2 (l) x 2.3mm (d)
- Overall: 32.6 (l) x 27.5mm (d)

P 9004

$4.95

** No load torque under maximum efficiency*

Solenoids

Heavy Duty

- Voltage: 6VDC 900mA -12VDC 1.8A
- Size: 26.4 (h) x 29 (w) x 47.5 (l)
- Shaft Movement: Pull type

P 9010

$19.95

Flapper/Clicker

- Light Duty with Mounting Bracket
- Voltage: 12 – 24VDC 75mA

P 9012

$2.95

Globes and Holders

5mm 'Grain of Wheat' Globe

12V 50mA, with Pigtail Leads.
P 8140

$1

3mm Mini 50mA Pilot Globes

1.5V	Red leads	P 8132
3.0V	Green leads	P 8133
12V	Yellow leads	P 8130

70¢

3mm Mini Coloured Pilot Globes

1.5V 50mA

Red globe	P 8120
Green globe	P 8121
Blue globe	P 8122
Yellow globe	P 8123
Orange globe	P 8124

85¢

Mini Bi-pin Globe

12V 50mA, suits P 7580 – P 7586 Miyama illuminated push button switches.
P 8158

$2.50

Wedge Lamp

12V – 14V 80mA, suits P 7591 & P 7593 Illuminated Switches & P 8170 Lamp Holder.
P 8157

$2.20

Xenon Flashtubes

White-light flash tubes for photoflash, timing lights, security beacons, industrial and disco strobe applications.

U-Type, 36mm Length

200-400V (300V Nom) 60 Joules.
P 8164

$5.50

Straight Type, 32mm Length

200-400V (300V Nom) 0.1 Joules.
P 8166

$3.60

Flashtube Trigger Transformer

250V Primary – 6kV Secondary.
M 0104

$1.95

See page 223 for a suitable capacitor

Neon Globes

Striking Voltage: 70-90V @ 600uA
Use 240k 1/4W series resistor for 240VAC operation.
P 8160

70¢

Mini Globes and Bezels

MES Globe Sockets

With round flange base and screw terminals
P 8161 **$1.60**

With Slot Mount and Solder Terminals
P 8162 **$1.50**

Wedge Globe Sockets

Wedge with right angle bracket and mini solder tags, suit P 8157 Globes.
P 8170 **95¢ ea**

MBC Globe Sockets

With right angle bracket and mini solder tags.
P 8171 **$1.55**

Miniature Panel Mount Globes

MES Tubular Globes

1.5V 300mA	P 8147
6.3V 300mA	P 8150
12V 300mA	P 8152

70¢ ea

MBC Tubular Globes

1.5V 300mA	P 8183
6.3V 300mA	P 8185
12V 300mA	P 8176

70¢ ea

LES Tubular Globes

12V 50mA long version for P 8100 & P 8102 bezels.
P 8155 **75¢ ea**

12V 50mA short version for P 8050, 52, 54 & 56 bezels.
P 8159 **75¢ ea**

Bezels

Sub-miniature 12V

Supplied with P 8155 LES Globe
Mounting hole: 11mm
Clearance: 24mm

Red	P 8100
Green	P 8102

$2.70 ea

Miniature 12V

Supplied with P 8159 LES Globe
Mounting hole: 11mm
Clearance: 21mm

Red	P 8050
Green	P 8052
Amber	P 8054
Blue	P 8056

$2.50 ea

LED Bezels – Low Current

Rating: 2VDC @ 20mA
Mounting hole: 8mm
Clearance: 16mm

Red	P 8104
Green	P 8106

$2 ea

LED Bezel – High Intensity

LED lens: Water Clear
Emitted light: Green
Luminous intensity: 300mcd
Rating: 2.4VDC 20mA, 100mW
Mounting hole: 8mm
Clearance: 15mm
P 8107 **$3 ea**

LED Bezel – Dual Colour

LED lens: Milky White
Emitted light: Red & Green
Rating: 2.8VDC 20mA (max)
Mounting hole: 7mm
Clearance: 15mm
P 8108 **$3.95 ea**

Neon Bezels

Subminiature size

With flying leads for convenience.
Emitted light: Red
Striking voltage: 90V
Use 270k 1/4W series resistor for 240VAC.
Mounting hole: 7mm
Clearance: 16mm
P 8112 **$2.95 ea**

Miniature size

240VAC with flying leads for convenience plus in-built series resistor.
Emitted light: Red
Mounting hole: 4.3mm
Clearance: 49mm
P 8114 **$2.95 ea**

Medium size

240VAC with in-built series resistor.
Mounting hole: 9.7mm
Clearance: 35mm
Miniature Solder Tags

Red	P 8116
Green	P 8117

$2.95 ea

Fuses

Fast Blow Tubular Glass

5AG 38 x 10mm

10A 32V	P 7886
15A 32V	P 7888
20A 32V	P 7890
25A 32V	P 7892
30A 32V	P 7894

$1.53ea for 10 or more **$1.70 ea**

See page 137 for Gold Capped 5AG Car Audio/Hi Fi Fuses

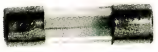
Fast Blow Tubular Glass

3AG 32 x 6mm

100mA	P 7950		
150mA	P 7952	3A	P 7966
250mA	P 7954	5A	P 7968
315mA	P 7955	7.5A	P 7970
350mA	P 7956	10A	P 7972
500mA	P 7958	15A	P 7974
1Amp	P 7960	20A	P 7976
1.5A	P 7962	25A	P 7978
2A	P 7964	30A	P 7980
2.5A	P 7965	35A	P 7982

32c ea for 10 or more **40¢ ea**

Fast Blow Tubular Glass



M205 20 x 5mm

125mA	P 7939	1.6A	P 9344
200mA	P 7929	2A	P 7936
250mA	P 7930	2.5A	P 7937
315mA	P 7931	3A	P 9346
400mA	P 9342	3.15A	P 9347
500mA	P 7932	4A	P 9348
750mA	P 7933	5A	P 7938
1Amp	P 7934	10A	P 9354
1.25A	P 7935		

28c ea for 10 or more **35¢ ea**

Slow Blow Tubular Glass

3AG 32 x 6mm

200mA	P 9381	1.6A	P 9401
250mA	P 7940	2A	P 7946
500mA	P 7942	2.5A	P 7943
600mA	P 7941	3A	P 7947
1Amp	P 7944	5A	P 7948
1.5A	P 7945	8A	P 7949

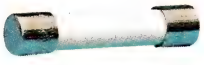
86c ea for 10 or more **95¢ ea**

M205 20 x 5mm

100mA	P 7919	2A	P 7928
250mA	P 7920	2.5A	P 9314
315mA	P 7922	3.15A	P 9316
400mA	P 7923	4A	P 9318
500mA	P 7924	5A	P 7925
1Amp	P 7926		

80c ea for 10 or more **95¢ ea**

Fast Blow Tubular Ceramic



3AG 32 x 6mm

7A	P 8507	15A	P 8515
8A	P 8508	20A	P 8520
10A	P 8510		

$1.31 ea for 10 or more **$1.45 ea**

M205 20 x 5mm

630mA	P 8401
8A	P 8408
10A	P 8410

$1.31 ea for 10 or more **$1.25 ea**

Fuses

Thermal Fuses

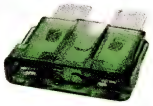
240V 10A

96°C P 7984
139°C P 7986

Made in Japan

$1.95 ea

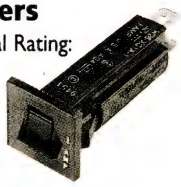
ATC Car Blade Fuses



5A – Tan	P 7988		
7.5A – Brown	P 7990		
10A – Red	P 7992		
15A – Blue	P 7994	30A – Green	P 7999
20A – Yellow	P 7996	35A – Purple	P 7997
25A – Clear	P 7998	40A – Orange	P 8001

60¢ ea

Mini Circuit Breakers



Electrical Authority Approval Rating: 32VDC/250VAC. Mounting Hole: 16mm x 1.57mm Snap Lock Fitting. Spade Terminals. Soldering is not recommended.

1A	P 8201	5A	P 8205	10A	P 8210
2A	P 8202	7A	P 8207	15A	P 8215
3A	P 8203				

$9.95 ea

Fuseholders

Panel Mount: 10A
Insulation breakdown: 5MΩ/min
Mounting hole: 13.5mm

Quick Clip/Release Holder

3AG (32 x 6mm)
Face size: 17mm Square
P 7900
$1.20ea for 10 or more

$1.75

Screw Cap Holder

3AG (32 x 6mm)
P 7902
$1.28ea for 10 or more

$1.50

M205 (20 x 5mm)
P 7918
$1.11ea for 10 or more

$1.30

5AG (38 x 10mm)
600VAC 30A
Mounting hole: 22mm
Security bolts: 33mm Centers
P 7915

$6.95

Fingerproof

Safety Holder.
Genuine fingerproof
3AG (32 x 6mm)
P 7916
M 205 (20 x 5mm)
P 7914

$4.95 ea

Line Fuseholders

3AG Light Duty

12VDC 3A Non-UV
Polyethylene with 600mm Leads.
P 7912 **$1.28 ea for 10 or more**

$1.50 ea

3AG Heavy Duty

12VDC 20A with 100mm Leads.
P 7913 **$2.00 ea for 10 or more**

$2.50

M205 UV Protected

250V 10A with 200mm Leads.
P 9962 **$1.75 ea for 10 or more**

$1.95 ea

3AG Waterproof

32VDC 30A
High quality, ideal for most harsh environments.
P 7917 **$7.61 ea for 10 or more**

$8.95

ATC Blade Holder

12VDC 30A
With protection cap and 300mm #12 Leads.
P 7905 **$2.13 ea for 10 or more**

$2.50

PCB Mount Fuseholders

3AG Clips on phenolic base.
P 7908 **3AG** P 7910 **M205**
85c ea for 10 or more

$1 ea

3AG PCB Clips

Pack of 8 Clips.
H 1700

$1.30

M205 PCB Clips

Pack of 8 clips.
H 1701

$1.30

Fluke Fuses Looking for Fluke Meter Fuses? You'll find them on Page 182

Coil Formers & Accessories

Former

Material: Phenolic Outside Diameter: 4.83mm Winding Height: 14mm (max) Threading: Suits 4mm Ferrite Cores
R 5020
68c ea for 10 or more

85¢

6-Pin Former Base

R 5010
68c ea for 10 or more

85¢

Tinned Copper Screening CAN

12.7mm(w) x 13.4(d) x17.8(h)mm.
R 5000
72c ea for 10 or more

90¢

4mm Ferrite Cores

Pack of 4

• 10mm(long) x 4mm(diam) • 0.5mm thread pitch

F29 suits 10-220MHz operation
• ui=12
R 5030

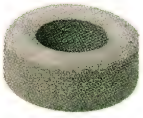
$1.95 pk

F16 suits 0.5-15MHz operation
• ui=125
R 5025

$1.95 pk

Toroids

Iron Powder Toroid



Enamel Coated, AL=45nH (approx) 14.8mm(OD) x 8mm (ID) x 6.35mm(H). Suit EMI Suppression as choke in TRIAC circuits.
R 5410

$2.95

Miniature Toroid

F43 Material – for RF suppression (30MHz-400MHz) in Amplifiers, etc. 9.5mm(OD) x 5mm(ID) x 5mm(L), AL=520nH
R 5400

50¢

Toroidal Balun Kit

Make your own 3-30MHz balun or impedance matching transformer. Can also be used for RFI suppression by winding speaker leads through the core. Kit contains 2" toroid and insulated copper wire.
D 5350

$18.50

Ferrite Beads

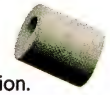
Normally threaded on wire leads to reduce EMI radiation and spurious effects from undesired RF pickups. Usable also as cores for pulse and wideband transformers.

Single Hole, Low Frequency

F8 Material – for LF Suppression
4mm(OD) x 2mm(ID) x 5mm(L)
R 5420

55¢ ea

Single Hole, High Frequency



F29 Material – for HF/VHF Suppression.
4mm(OD) x 2mm(ID) x 5mm(L)
R 5425

55¢ ea

6-Hole Bead

F14 Material – for HF/VHF Suppression. 6mm(OD) x10mm(ID) x 0.9mm holes (x 6)
R 5430

75¢ ea

Please ask our staff for Bulk Purchase savings

Ferrites & Chokes

Aerial Rod with Coil

Ferrite Rod with prewound B/C coil. Used in pocket radios, Funway 1 & 2, as replacement antenna or in new projects.
R 5100

$1.50 ea

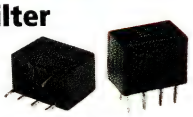
Ferrite Rods

F14 Grade suitable for LW & MW antenna coils, as well as for RFI/transients type suppression (simply wind as many turns as possible of cable around the rod to serve as a choke). Available in two lengths.

R 5106	180 x 10mm	$2.95
R 5107	100 x 10mm	$1.95

NEW FOR '99

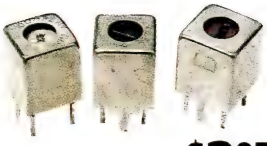
455kHz Ceramic Filter



Murata CFW455E used as replacement IF transformers Selectivity (typical): 20dB @ ±10kHz Bandwidth: 3dB ±4.5kHz
R 5050

$6.95 ea

Slug Tuned IF/OSC



Coil Pack Set comprises of 1st, 2nd & 3rd 455kHz standard miniature IF transformers and b/c oscillator coil.
R 5040

$2.95 ea

Balun Formers

Suitable for VHF (F14) and VHF/UHF (F29) TV baluns, wideband and pulse transformers, interference suppression, etc. F29 ferrite has 0.5dB loss @ 40-220MHz increasing to 1dB @ 800MHz.

F14 Ferrites

Type: 1050/1/F14
13.5 x 13.2 x 7.4mm
In pack of 2.
R 5440

$1.75 pk

F29 Ferrites

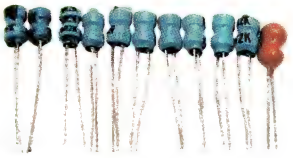
Type: 1050/2/F29
6.5 x 13.2 x 7.4mm
In pack of 2.
R 5445

$1.75 pk

DC Power Choke

Filter used for reducing radio frequency induced noise and voltage spikes in electronic equipment. Inductance @ ||1A: 1mH (approx) Max Current: 4 Amps (continuous)
Dimensions: 20 x 16 x 16mm
Made in Japan
R 5300

$4.95



RF Chokes

Value	(mA)	Cat No.	Value	(mA)	Cat No.
1.0uH	300	R 5200	82uH	200	R 5226
1.5uH	300	R 5202	100uH	200	R 5228
2.2uH	300	R 5204	150uH	100	R 5230
3.3uH	300	R 5206	220u	100	R 5232
4.7uH	300	R 5208	330u	50	R 5234
6.8uH	300	R 5210	470u	50	R 5236
8.2uH	300	R 5212	560u	50	R 5238
10uH	300	R 5214	820u	50	R 5240
15uH	200	R 5216	1.0m	58	R 5242
22uH	200	R 5218	1.5m	58	R 5244
33uH	200	R 5220	2.5m	33	R 5246
47uH	200	R 5222	4.7m	20	R 5248
68uH	200	R 5224	10m	37	R 5250

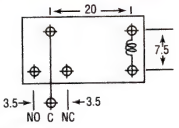
95c for 10 or more

$1.05 ea

Relays

SPDT 12VDC

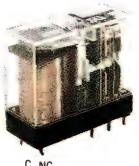
High Power Relay
Contact Current (max): 10A
Contact Voltage (max): 240VAC, 30VDC
Nominal Coil Voltage: 12VDC
Coil Resistance: 200 ohms
Operating Time (typical): 20ms
Release Time (typical): 10ms
Overall Size: 29(l) x 13(w) x 25(h)mm
P 8010



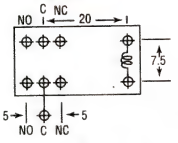
$8.06 ea for 10 or more

$8.95 ea

DPDT 12VDC



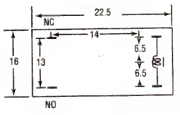
High Power Relay
Contact Current (max): 10A
Contact Voltage: 240VAC, 30VDC Nominal Coil Voltage: 12VDC
Coil Resistance: 200 ohms
Operating Time (typical): 20mS
Release Time (typical): 10mS
Overall Size: 29(l) x 13(w) x 25(h)mm
P 8012



$9.95 ea

SPDT 8V - 12VDC

Contact Current (max): 3A @ 120VAC
Contact Voltage (max): 250VAC
Coil Voltage (nom.): 9VDC
Coil Resistance: 225 ohms
Operating Time (typical): 15ms
Release Time (typical): 10ms
Overall Size: 22.6(l) x 16.4(w) x 21.3(h)mm
P 8008



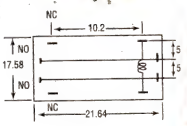
$2.51 for 10 or more

$2.95 ea

Please ask our staff for savings on Bulk Purchases

DPDT 12VDC Relay

Contact Current (max): 5A @ 120VAC
Contact Voltage (max): 120VAC
Coil Voltage (nom.): 12VDC
Coil Resistance: 280ohms
Operating Time (typical): 10ms
Release Time (typical): 7ms
Overall Size: 20.5(l) x 16(w) x 16.3(h)mm
P 8024



$4.50 for 10 or more

$5 ea

DPDT 12VDC Heavy Duty Relay

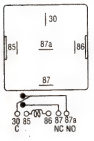
High contact to coil voltage isolation.
Contact Current (max): 10A
Contact Voltage (max): 240VAC
Nominal Coil Voltage: 12VDC
Coil Resistance: 160 ohms
Operating Time (typical): 20ms
Release Time (typical): 20ms
Overall Size: 28(l) x 21(w) x 35(h)mm
P 8014

$10.76 for 10 or more

$11.95 ea

SPDT 12VDC Horn Relay

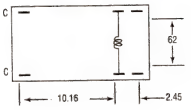
Ideal for car/boat horn circuits, alarms, ignition cut-outs or any application where high currents have to be switched.
Contact Current: 20ADC
Contact Voltage: 12VDC
Coil Voltage: 12VDC
Termination: Spade Lugs
Overall Size: 30(l) x 30(w) x 26(h)mm
P 8035



$5.95 ea

SPDT 12VDC

High Sensitivity Type. Gold overlay silver contacts.
Contact Rating: 28VDC @1A 120VAC AC @ 0.5A
Contact Switching Current: 2A Contact Switching Voltage: 150VAC Coil Resistance: 700 ohms @ 17mA,12VDC
Operating Time (typical): 5ms
Release Time (typical): 5ms
Overall Size: 15.6(l) x 10.6(w) x 10.5(h)
P 8007



$6 ea

SPDT 5VDC

High Sensitivity Type. Gold overlay silver contacts.
Contact Rating: 28VDC @ 1A 120VAC @ 0.5A
Contact Switching Current: 2A
Contact Switching Voltage: 150VDC
Coil Resistance: 120 ohms @ 42mA, 5VDC
Operating Time (typical): 5ms
Release Time (typical): 5ms
Overall Size: 15.6(l) x 10.6(w) x 10.5(h)
P 8005

$5.36 ea for 10 or more

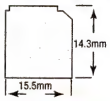
$6 ea

Coloured Plastic Knobs

15mm Diameter

Shaft types: screw fit
Red P 7072
Blue P 7074

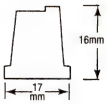
$1.98 ea for 5 or more



$2.20 ea

17mm Diameter

Shaft Type: 6mm fluted push fit
Green P 7132
Yellow P 7134
White P 7136

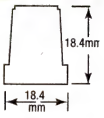


90c ea for 5 or more

$1 ea

18mm Diameter

Shaft type: 6mm
fluted push fit
Red P 7040
Blue P 7042
Grey P 7044
Green P 7046
Yellow P 7048

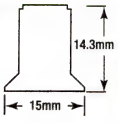


$1.13 ea for 5 or more

$1.25 ea

Metric Range

15mm Diameter plus Skirt

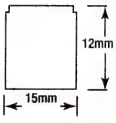


Shaft type: 6mm
fluted push fit
P 7126

86c ea for 5 or more

95¢ ea

15mm Diameter with Silver Shoulder

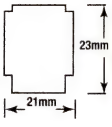


Shaft type: 6mm
fluted push fit
P 7000

$1.49 ea for 10 or more

$1.65 ea

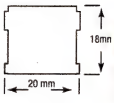
21mm Diameter with fluted Grip



Shaft type: 6mm
fluted push fit
P 7004

$2.20 ea

20mm Diameter Aluminium Shell

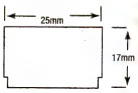


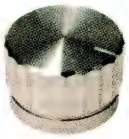
Knurled fingergrip shaft
Type: 6mm fluted push fit
P 7006

$1.98 ea for 10 or more

$2.20 ea

25mm Diameter Satin Finish



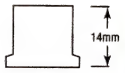


Fluted fingergrip
shaft type: 6mm
P 7008

$1.98 ea for 10 or more

$2.20 ea

12mm Diameter



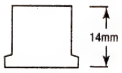
(15mm plus skirt)

Fluted push fit P 7010
Screw fit P 7020

$1.31 ea for 10 or more

$1.45 ea

16mm Diameter



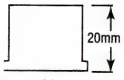
(20mm plus skirt)

Fluted push fit P 7012
Screw fit P 7022

$1.40 ea for 10 or more

$1.55 ea

20mm Diameter



(24mm plus skirt)

Fluted push fit P 7014
Screw fit P 7024

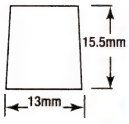
$1.76 ea for 10 or more

$1.95 ea

Imperial Range

Smooth bore with grub screw to suit 1/4" shafts

13mm Diameter Instrument

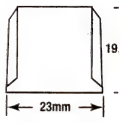


Brass insert
miniature knob
P 7124

$1.80 ea for 5 or more

$2 ea

23mm Diameter

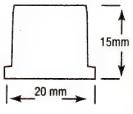


Deluxe instrument
with 4-way
fingergrips
P 7122

$2.66 ea for 5 or more

$2.95 ea

15mm Diameter



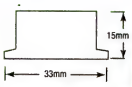
(20mm plus skirt)

With dot indicator
P 7100

$1.76 ea for 5 or more

$1.95 ea

30mm Diameter



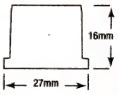
(33mm plus skirt)

With silver top insert
P 7105

$1.76 ea for 5 or more

$1.95 ea

24mm Diameter



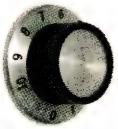
(27mm plus skirt)

With silver top insert
P 7106

$1.53 ea for 5 or more

$1.70 ea

24mm Diameter



37mm with 0-10
calibrated skirt
P 7104

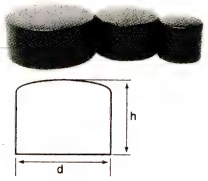
$1.70 ea for 5 or more

$2 ea

Hi-Fi/Audio Knobs

Low profile dome top knobs with dot indicator

Dimensions:
P 7115 & P 7120 h = 18mm, d = 20mm
P 7113 & P 7118 h = 18mm, d = 30mm
P 7116 h = 19.5mm, d = 40mm



20mm Diameter

Push fit P 7120 **Screw fit** P 7115

$1.98 ea for 5 or more

$2.20 ea

30mm Diameter

Push fit P 7118 **Screw fit** P 7113

$2.15 ea for 5 or more

$2.50 ea

40mm Diameter

Push fit P 7116

$2.15 ea for 5 or more

$3.25 ea

Slider Pot

Knob size: 12mm x 23mm
Shaft gole: 6.5(w) x 4mm(d)
P 7150

90c ea for 5 or more

$1 ea

** Note: All measurements are approximates*

Miscellaneous

50mm Diameter Vernier Drive

Made in Japan
Suits 1/4" shaft, depth 0.39"
Scale range: 0-100 in single increments
Scale radian: 180°
Ratio (approx): 6:1
P 7170

$19.95 ea for 5 or more

$27.95 ea

Rotary Switches

Type: Open case **Mounting:** Panel **Cut out:** 9mm **Switch rating:** 125VAC 300mA **Switching:** Make before break **Shaft:** 20mm x 6mm **Shaft Type:** Metric fluted

Poles	Positions	Cat No.
6	2	P 7502
4	3	P 7504
3	4	P 7506
2	5	P 7508
2	6	P 7510

$3 ea

Type: Programmable **Mounting:** PCB/Panel **Panel cut out:** 9.4mm **Contacts:** Silver-plated **Brass Rating:** 240VAC 150mA **Switch Indexing:** 30° **Switching:** Break Before Make **Shaft:** 38mm x 6.4mm **Included Hardware:** Nut, Lock-washer and "stop ring"

Poles	Positions	Cat No.
3	2-4	P 7516
1	2-12	P 7518
4	2-3	P 7520
2	2-6	P 7522

$3.95 ea

Potentiometers

24mm Rotary Pots – Metric 6mm Diameter Shaft

All use 8mm diameter panel Mounting holes. All pots include nuts & washers.

Single Gang

LINEAR Taper 0.5W 500V

Resistance	Cat No.	Resistance	Cat No.
500 Ohms	R 6802	50k	R 6809
1k	R 6803	100k	R 6810
5k	R 6805	500k	R 6812
10k	R 6806	1M	R 6813
20k	R 6807	2M	R 6814

LOG Taper 0.25W 250V

10k	R 6820	100k	R 6824
50k	R 6823		

$2.15 ea

Dual Gang

LINEAR Taper 0.25W 350V

10k	R 6834	50k	R 6839
20k	R 6836	100k	R 6840

LOG Taper 0.125W 250V

50k	R 6853

$3.25 ea

Single Gang Switched

LOG Taper 0.25W 250V
SPST Switch Rating: 125V 1A

10k	R 6879	1M	R 6888

$4.35 ea

17mm Single Gang Switched SPST

LOG Taper 500mW 150V
Switch Rating: 12VDC 1A

1k	R 1972	10k	R 1977
5k	R 1974	50k	R 1970

$1 ea

16mm Special Function Dual Gang

Panel Mounting Hole: 7mm diameter

Resistance	Function & Type	Cat No.
50k	41 click log taper	R 7800
100k	41 click log taper	R 7802
25k	Centre click linear taper	R 7810
100k	Centre click linear taper	R 7820

$2 ea

16mm Rotary Pots – Metric

6mm Diameter Shaft
Panel Mounting Hole: 7mm diameter.
All pots include nuts & washers

Single Gang

LINEAR Taper 200mW 200V

Resistance	Cat No.	Resistance	Cat No.
500 Ohms	R 7549	100k	R 7561
1k	R 7551	250k	R 7563
5k	R 7553	500k	R 7565
10k	R 7555	1M	R 7567
25k	R 7557	2M	R 7569
50k	R 7559		

$1.95 ea

LOG Taper 100mW 150V

Resistance	Cat No.	Resistance	Cat No.
500 Ohms	R 7500	100k	R 7512
1k	R 7502	250k	R 7514
5k	R 7504	500k	R 7516
10k	R 7506	1M	R 7518
25k	R 7508	2M	R 7520
50k	R 7510		

$1.95 ea

Dual Gang

LINEAR Taper 125mW 200V

Resistance	Cat No.	Resistance	Cat No.
5k	R 7653	100k	R 7661
10k	R 7655	500k	R 7665
25k	R 7657	1M	R 7667
50k	R 7659	2M	R 7669

LOG Taper 60mW 150V

5k	R 7604	100k	R 7612
10k	R 7606	500k	R 7616
25k	R 7608	1M	R 7618
50k	R 7610	2M	R 7620

$3.25 ea

24mm Wirewound Pot – 1/4" shaft

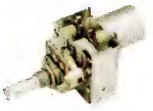
Single gang LINEAR taper
3W 500VDC **Mounting Hole:**
9mm. All pots include brass nuts and washers.
Made in Australia for quality

Resistance	Cat No.	Resistance	Cat No.
5 Ohms	R 6901	500Ohms	R 6913
10 Ohms	R 6903	1k	R 6915
25 Ohms	R 6905	2k	R 6917
50 Ohms	R 6907	5k	R 6921
100 Ohms	R 6909	7.5k	R 6923
200 Ohms	R 6911	10k	R 6925

$9.95 ea

Save on 10 up bulk purchases. Please ask our sales staff for price savings details.

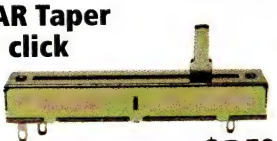
Motorised Dual Gang 0.25W



Taper: LOG Resistance: 50k
Motor: 3-6VDC (4.5V Typical)
As used in Remote Control Amplifiers
R 7830

$8.95 ea

Slider LINEAR Taper with centre click



0.25W 350V
Travel: 45mm
Total Length:
73mm Lever **Thickness:** 1.2mm
P1980

$2.50 ea

Trimpots

Vertical mount,
horizontal adjustment
5mm miniature 0.125W

Resistance	Cat No.	Resistance	Cat No.
100 Ohms	R 1929	50k	R 1945
200 Ohms	R 1931	100k	R 1947
500 Ohms	R 1933	200k	R 1949
1k	R 1935	500k	R 1951
2k	R 1937	1M	R 1953
5k	R 1939	2M	R 1954
10k	R 1941		
20k	R 1943		

50¢ ea

Trimpots

Horizontal mount,
vertical adjustment
5mm miniature 0.125W

Resistance	Cat No.	Resistance	Cat No.
100 Ohms	R 1760	20k	R 1773
200 Ohms	R 1761	50k	R 1775
500 Ohms	R 1763	100k	R 1777
1k	R 1765	200k	R 1779
2k	R 1767	500k	R 1781
5k	R 1769	1M	R 1783
10k	R 1771	2M	R 1784

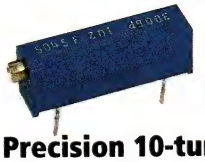
50¢ ea

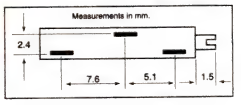
10mm 0.25W Sub-miniature

Resistance	Cat No.	Resistance	Cat No.
100 Ohms*	R 1956	20k	R 1963
200 Ohms	R 1957	50k*	R 1964
500 Ohms*	R 1958	100k*	R 1965
1k*	R 1959	200k	R 1966
2k	R 1960	500k*	R 1967
5k*	R 1961	1M*	R 1968
10k*	R 1962	2M*	R 1969

**** Limited stocks. Not available at all stores***

40¢ ea





Precision 10-turn

Resistance	Cat No.	Resistance	Cat No.
1k	R 1900	20k	R 1902
5k	R 1904	50k	R 1903
10k	R 1901	100k	R 1905

$1.95 ea

1/4 W Metal Film Resistors, E24 Series

Traditional 5 band code 1% Tolerance Metalfilm Resistors in 4 band colour code to aid reading and decoding values

Value in Ω	Cat No.	Value in Ω	Cat No.	Value in Ω	Cat No.	Value in Ω	Cat No.
10R	R 0526	220R	R 0558	4k7	R 0590	100k	R 0624
11R	R 0527	240R	R 0591	5k1	R 0591	110k	R 0625
12R	R 0528	270R	R 0560	5k6	R 0592	120k	R 0626
13R	R 0529	300R	R 0561	6k2	R 5093	130k	R 0627
15R	R 0530	330R	R 0562	6k8	R 0594	150k	R 0628
16R	R 0531	360R	R 0563	7k3	R 0595	160k	R 0629
18R	R 0532	390R	R 0564	8k2	R 0596	180k	R 0596
20R	R 0533	430R	R 0565	9k1	R 0597	200k	R 0631
22R	R 0534	470R	R 0566	10k	R 0598	220k	R 0632
24R	R 0535	510R	R 0567	11k	R 0599	240k	R 0633
27R	R 0536	560R	R 0568	12k	R 0600	270k	R 0634
30R	R 0537	620R	R 0569	13k	R 0601	300k	R 0635
33R	R 0538	680R	R 0570	15k	R 0602	330k	R 0636
36R	R 0539	750R	R 0571	16k	R 0603	360k	R 0637
39R	R 0540	820R	R 0572	18k	R 0604	390k	R 0638
43R	R 0541	910R	R 0573	20k	R 0605	430k	R 0639
47R	R 0542	1k0	R 0574	22k	R 0606	470k	R 0640
51R	R 0543	1k1	R 0575	24k	R 0607	510k	R 0641
56R	R 0544	1k2	R 0576	27k	R 0608	560k	R 0642
62R	R 0545	1k3	R 0577	30k	R 0609	620k	R 0643
68R	R 0546	1k5	R 0578	33k	R 0612	680k	R 0644
75R	R 0547	1k6	R 0579	36k	R 0613	750k	R 0645
82R	R 0548	1k8	R 0580	39k	R 0614	820k	R 0646
91R	R 0549	2k0	R 0581	43k	R 0615	910k	R 0647
100R	R 0550	2k2	R 0582	47k	R 0616	1M0	R 0648
110R	R 0551	2k4	R 0583	51k	R 0617		
120R	R 0552	2k7	R 0584	56k	R 0618		
130R	R 0553	3k0	R 0585	62k	R 0619		
150R	R 0554	3k3	R 0586	68k	R 0620		
160R	R 0555	3k6	R 0587	75k	R 0621		
180R	R 0556	3k9	R 0588	82k	R 0622		
200R	R 0557	4k3	R 0589	91k	R 0623		

8¢ea

6c ea for 10 or more

Carbon Film Resistor E12 Series

5% Tolerance E12 "Preferred Value" resistors in 1/4W, 1/2W and 1W ratings

Value in Ω	1/4W 5c ea 10 up 3.5c ea	1/2W 10c ea 10 up 5c ea	1W 15c ea 10 up 12c ea	Value in Ω	1/4W 5c ea 10 up 3.5c ea	1/2W 10c ea 10 up 5c ea	1W 15c ea 10 up 12c ea
0R0	R 1000			3k3	R 1086	R 1286	R 1486
1R0	R 1002	R 1202	R 1402	3k9	R 1088	R 1288	R 1488
1R2	R 1004	R 1204	R 1404	4k7	R 1090	R 1290	R 1490
1R5	R 1006	R 1206	R 1406	5k6	R 1092	R 1292	R 1492
1R8	R 1008	R 1208	R 1408	6k8	R 1094	R 1294	R 1494
2R2	R 1010	R 1210	R 1410	8k2	R 1096	R 1296	R 1496
2R7	R 1012	R 1212	R 1412	10k	R 1098	R 1298	R 1498
3R3	R 1014	R 1214	R 1414	12k	R 1100	R 1300	R 1500
3R9	R 1016	R 1216	R 1416	15k	R 1102	R 1302	R 1502
4R7	R 1018	R 1218	R 1418	18k	R 1104	R 1304	R 1504
5R6	R 1020	R 1220	R 1420	22k	R 1106	R 1306	R 1506
6R8	R 1022	R 1222	R 1422	27k	R 1108	R 1308	R 1508
8R2	R 1024	R 1224	R 1424	33k	R 1112	R 1312	R 1512
10R	R 1026	R 1226	R 1426	39k	R 1114	R 1314	R 1514
12R	R 1028	R 1228	R 1428	47k	R 1116	R 1316	R 1516
15R	R 1030	R 1230	R 1430	56k	R 1118	R 1318	R 1518
18R	R 1032	R 1232	R 1432	68k	R 1120	R 1320	R 1520
22R	R 1034	R 1234	R 1434	82k	R 1122	R 1322	R 1522
27R	R 1036	R 1236	R 1436	100k	R 1124	R 1324	R 1524
33R	R 1038	R 1238	R 1438	120k	R 1126	R 1326	R 1526
39R	R 1040	R 1240	R 1440	150k	R 1128	R 1328	R 1528
47R	R 1042	R 1242	R 1442	180k	R 1130	R 1330	R 1530
56R	R 1044	R 1244	R 1444	220k	R 1132	R 1332	R 1532
68R	R 1046	R 1246	R 1446	270k	R 1134	R 1334	R 1534
82R	R 1048	R 1248	R 1448	330k	R 1136	R 1336	R 1536
100R	R 1050	R 1250	R 1450	390k	R 1138	R 1338	R 1538
680R	R 1070	R 1270	R 1470	2M7	R 1158	R 1358	R 1558
820R	R 1072	R 1272	R 1472	3M3	R 1160	R 1360	R 1560
1k0	R 1074	R 1274	R 1474	3M9	R 1162	R 1362	R 1562
1k2	R 1076	R 1276	R 1476	4M7	R 1164	R 1364	R 1564
1k5	R 1078	R 1278	R 1478	5M6	R 1166	R 1366	R 1566
1k8	R 1080	R 1280	R 1480	6M8	R 1168	R 1368	R 1568
2k2	R 1082	R 1282	R 1482	8M2	R 1170	R 1370	R 1570
2k7	R 1084	R 1284	R 1484	10M	R 1172	R 1372	R 1572

Please Note:

The 10 up price shown for resistors is for 10 mixed values in the same wattage

Metal CAN Electrolytics

Includes Mounting Hardware

Value uF	Working Volts (V)	Cat No.	Price each	Price 10 up
2500	80	R 4572	$8.50	$7.23
8000*	75	R 4590	$12.95	$11.01
8000	80	R 4592	$19.50	$13.65
10000	10	R 4480	$1.00	$0.70

**Limited stocks – not available in all stores*

5 Watt 10% Wire Wound Resistors

Dimensions (approx): 9mm x 25mm
Casing: Cement/Ceramic

Value in Ω	Cat No.	Value in Ω	Cat No.
0R1	R 1600	120R	R 1652
0R22	R 1603	150R	R 1654
0R47	R 1601	180R	R 1656
1R0	R 1602	220R	R 1658
1R2	R 1604	270R	R 1660
1R5	R 1606	330R	R 1662
2R2	R 1610	390R	R 1664
3R3	R 1614	470R	R 1666
4R7	R 1618	560R	R 1668
5R6	R 1620	680R	R 1670
6R8	R 1622	820R	R 1672
8R2	R 1624	1k0	R 1674
10R	R 1626	1k2	R 1676
12R	R 1628	1k5	R 1678
15R	R 1630	1k8	R 1680
18R	R 1632	2k2	R 1682
22R	R 1634	2k7	R 1684
27R	R 1636	3k3	R 1686
33R	R 1638	3k9	R 1688
39R	R 1640	4k7	R 1689
47R	R 1642	8k2	R 1708
56R	R 1644		
68R	R 1646		
82R	R 1648		
100R	R 1650		

65¢ea

50c ea for 10 or more

Electrolytic Capacitors

Except for BP/NP Bipolar types, electrolytic capacitors are polarised and are provided with a vent hole to aid in the escape of gases. All electrolytics in this catalogue have a standard temperature rating of 85°C.

Axial/RT Electrolytics

RT or "Rat's Tail" Double ended lead types allow for "reach" and height advantages where other electrolytic types may not.

Value uF	Working Volts	Cat No.	Price each	Price 10 up
1.0	350	R 4015	$0.75	$0.64
2.2	63	R 4020	$0.45	$0.38
3.3	25	R 4025	$0.45	$0.38
10	16	R 4055*	$0.45	$0.38
10	63	R 4065	$0.50	$0.43
10	80	R 4068	$0.65	$0.55
22	25	R 4086	$0.45	$0.38
22	63	R 4091	$0.55	$0.47
33	16	R 4095	$0.45	$0.38
47	25	R 4110	$0.45	$0.38
100	10	R 4125	$0.45	$0.38
100	25	R 4130	$0.55	$0.47
100	63	R 4135	$0.95	$0.81
220	16	R 4145	$0.60	$0.51
220	25	R 4150	$0.65	$0.55
470	63	R 4165	$1.85	$1.57
1000	16	R 4175	$1.25	$1.10
1000	25	R 4180	$1.50	$1.32
1000	35	R 4185	$1.85	$1.63
1000	63	R 4190	$2.95	$2.60
2200	16	R 4196	$1.50	$1.32
2200	25	R 4201	$1.95	$1.66
2200	35	R 4206	$2.95	$2.60
2200	50	R 4211	$3.95	$3.48
4700	35	R 4215*	$4.95	$4.36

Bipolar (BP) Electrolytics

Specially constructed non-polarised electrolytic capacitors that do not have a polarity and are therefore, used in circuits where changes in voltage polarity occurs, such as in speakers. Marked "BP" on the body, these are all rated at 50VDC 85°C.

Value uF	Cat No.	Price each	Price 10 up
2.2	R 4600	$0.50	$0.40
3.3	R 4605	$0.50	$0.40
4.7	R 4610	$0.55	$0.40
6.8	R 4620	$0.60	$0.40
10	R 4630	$0.75	$0.55
22	R 4640	$0.85	$0.60
47	R 4650	$1.55	$1.08

Radial (RB) Single-ended Lead Electrolytics

Value uF	Volt. WV	Cat No.	Price each	Price each
0.47	50V	R 4290	$0.25	$0.17
0.47	100V	R 4292	$0.30	$0.28
1.0	50V	R 4295	$0.25	$0.17
1.0	100V	R4297	$0.30	$0.21
2.2	100V	R 4302	$0.35	$0.24
4.7	25V	R 4310*	$0.25	$0.22
4.7	50V	R 4308	$0.30	$0.21
4.7	80V	R 4312	$0.35	$0.24
10	16V	R 4316*	$0.25	$0.22
10	25V	R 4315	$0.30	$0.24
10	63V	R 4317	$0.35	$0.28
22	25V	R 4319	$0.20	$0.14
22	35V	R 4320	$0.25	$0.20
22	50V	R 4321	$0.30	$0.21
33	16V	R 4335	$0.20	$0.16
33	35V	R 4340	$0.25	$0.17
47	25V	R 4350	$0.35	$0.25
100	16V	R 4360*	$0.30	$0.24
100	25V	R 4370	$0.35	$0.25
220	16V	R 4380	$0.40	$0.28
220	25V	R 4390	$0.45	$0.31
330	10V	R 4397*	$0.30	$0.24
330	25V	R 4400	$0.60	$0.42
470	10V	R 4407	$0.45	$0.31
470	16V	R 4410	$0.60	$0.53
470	25V	R 4420	$0.75	$0.67
680	16V	R 4435	$0.85	$0.75
1000	16V	R 4440	$0.95	$0.66
1000	25V	R 4450	$1.15	$0.81
1000	63V	R 4458	$1.95	$1.37
2200	16V	R 4459	$1.25	$0.87
2200	25V	R 4460	$1.65	$1.16
5600	40V	R 4475	$6.95	$6.83
6800	10V	R 4470*	$0.95	$0.68
10000	10V	R 4480	$1.95	$1.37
10000	40V	R 4483	$11.95	$8.37

Tag/Bead Tantalum Electrolytics

Resin dipped electrolytics which use a tantalum dielectric, giving a very low leakage but a high capacitance for the size of the package.

Value uF	Volt. WV	Cat No.	Price each	Price 10 up
0.1	35V	R 4700	$0.70	$0.48
0.22	35V	R 4705	$0.70	$0.48
0.33	35V	R 4710	$0.70	$0.48
0.47	35V	R 4715	$0.70	$0.48
0.68	35V	R 4717	$0.70	$0.48
1.0	35V	R 4720	$0.70	$0.48
2.2	35V	R 4730	$0.70	$0.49
3.3	35V	R 4735	$0.95	$0.65
4.7	35V	R 4740	$0.95	$0.67
6.8	35V	R 4745	$1.10	$0.80
10	25V	R 4750	$1.10	$0.96
22	16V	R 4760	$1.20	$0.84
33	10V	R 4765	$1.20	$1.01
33	16V	R 4766	$1.25	$1.06
47	6.3V	R 4770	$1.35	$1.14
100	3V	R 4775	$1.60	$1.12

Polystyrene

With a low temperature coefficient, these are ideal for use where stability is important. All are rated at 250V DC.

Value	Cat No.	Value	Cat No.	Value	Cat No.
33pF	R 2807	120pF	R 2821	470pF	R 2835
39pF	R 2809	150pF	R 2823	560pF	R 2837
47pF	R 2811	180pF	R 2825	680pF	R 2839
56pF	R 2813	220pF	R 2827	820pF	R 2841
68pF	R 2815	270pF	R 2829	1000pF	R 2843
82pF	R 2817	330pF	R 2831		
100pF	R 2819	390pF	R 2833		

90¢ea

10 or more 80¢ ea

High Tolerance 1% Polystyrene

0.001uF 63V R 2780 **90¢ea**

10 or more 80¢ ea

** Limited stocks - not available at all stores*

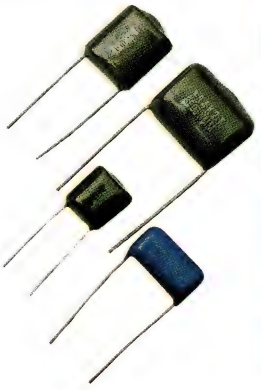
High Voltage MKT Boxed Capacitors

Plastic film polyesters with flame-retardant casing designed for mains voltage spike suppression

X-Class 275VAC Value in uF	Cat No.	Price	X-Class 275VAC Value in uF	Cat No.	Price	X-Class 275VAC Value in uF	Cat No.	Price
0.01	R 2620	$0.70	0.1	R 2628	$0.95	0.47	R 2634	$2.55
0.022	R 2622	$0.70	0.15	R 2629	$1.35	Y-Class 250VAC		
0.033	R 2624	$0.70	0.22	R 2630	$1.45	0.0047	R 2640	$1.95
0.047	R 2626	$0.75	0.33	R 2632	$1.75			

100VDC Metallised Polyester (Greencaps)

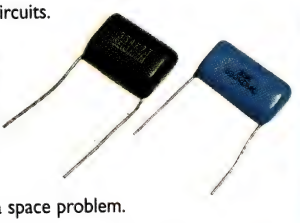
Greencaps are the most widely used of all capacitor types. These are all rated at 100VDC 5% tolerance.



Value in uF	Cat No.	Price each	Price 10 up	Value in uF	Cat No.	Price each	Price 10 up
0.001	R 2010	$0.25	$0.20	0.033	R 2070	$0.25	$0.20
0.0012	R 2012	$0.25	$0.20	0.039	R 2075	$0.25	$0.20
0.0015	R 2015	$0.25	$0.20	0.047	R 2080	$0.25	$0.20
0.0018	R 2018	$0.25	$0.20	0.056	R 2085	$0.25	$0.20
0.0022	R 2020	$0.25	$0.20	0.068	R 2090	$0.25	$0.20
0.0027	R 2027	$0.25	$0.20	0.082	R 2095	$0.25	$0.20
0.0033	R 2025	$0.25	$0.20	0.1	R 2100	$0.30	$0.25
0.0039	R 2030	$0.25	$0.20	0.12	R 2102	$0.35	$0.30
0.0047	R 2035	$0.25	$0.20	0.15	R 2105	$0.40	$0.35
0.0056	R 2040	$0.25	$0.20	0.22	R 2110	$0.45	$0.35
0.0068	R 2045	$0.25	$0.20	0.27	R 2115	$0.45	$0.32
0.0082	R 2050	$0.25	$0.20	0.33	R 2120	$0.45	$0.32
0.01	R 2055	$0.25	$0.20	0.39	R 2125	$0.55	$0.39
0.012	R 2057	$0.25	$0.20	0.47	R 2130	$0.80	$0.56
0.015	R 2060	$0.25	$0.20	1.0	R 2135	$1.25	$0.95
0.018	R 2062	$0.25	$0.20	2.0	R 2140	$1.65	$1.25
0.022	R 2065	$0.25	$0.20	3.3	R 2145	$2.15	$1.61
0.027	R 2067	$0.25	$0.20				

630VDC High Voltage Metallised Polyester

630 volts Polyesters are ideal replacements for most capacitors used in valve circuits. These are rated at 5% tolerance.



Value in uF	Cat No.	Price 1–9	Price 10 up	Value in uF	Cat No.	Price 1–9	Price 10 up
0.01	R 2160	$0.70	$0.62	0.1	R 2170	$1.40	$1.16
0.022	R 2162	$0.70	$0.62	0.22	R 2172	$1.60	$1.37
0.033	R 2164	$0.95	$0.67	0.33	R 2174	$1.95	$1.71
0.047	R 2166	$0.95	$0.81	0.47	R 2176	$2.00	$1.76

Plastic Film Boxed Casing MKT Capacitors

Boxed Casing Polyesters are used in place of Greencaps where there may be a space problem. Consistent 5.08mm Leg Spacing.

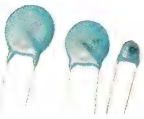
Value in uF	Voltage WV	Tol	Cat No.	Price 1–9	Price 10 up	Value in uF	Voltage WV	Tol	Cat No.	Price 1–9	Price 10 up
0.001	100	5%	R 3000	$0.30	$0.25	0.039	100	5%	R 3020	$0.30	$0.28
0.0012	100	5%	R 3001	$0.30	$0.25	0.047	100	5%	R 3021	$0.30	$0.28
0.0015	100	5%	R 3002	$0.30	$0.25	0.056	100	5%	R 3022	$0.30	$0.28
0.0018	100	5%	R 3003	$0.30	$0.25	0.068	100	5%	R 3023	$0.30	$0.28
0.0022	100	5%	R 3004	$0.30	$0.25	0.082	100	5%	R 3024	$0.35	$0.30
0.0033	100	5%	R 3006	$0.30	$0.25	0.1	100	5%	R 3025	$0.35	$0.30
0.0039	100	5%	R 3007	$0.30	$0.25	0.12	100	5%	R 3026	$0.40	$0.35
0.0047	100	5%	R 3008	$0.30	$0.25	0.15	100	5%	R 3027	$0.45	$0.40
0.0056	100	5%	R 3009	$0.30	$0.25	0.18	100	5%	R 3028	$0.45	$0.40
0.0068	100	5%	R 3010	$0.30	$0.25	0.22	100	5%	R 3029	$0.50	$0.45
0.0082	100	5%	R 3011	$0.30	$0.25	0.27	100	5%	R 3030	$0.60	$0.50
0.01	100	5%	R 3012	$0.30	$0.25	0.33	100	5%	R 3031	$0.70	$0.60
0.012	100	5%	R 3014	$0.30	$0.25	0.39	100	5%	R 3032	$0.85	$0.70
0.015	100	5%	R 3015	$0.30	$0.25	0.47	100	5%	R 3033	$0.95	$0.75
0.018	100	5%	R 3016	$0.30	$0.25	1.0	63	10%	R 3037	$1.35	$1.15
0.022	100	5%	R 3017	$0.30	$0.25	1.5	63	10%	R 3038	$1.75	$1.40
0.027	100	5%	R 3018	$0.30	$0.25	2.2	50	5%	R 3040	$2.45	$1.95
0.033	100	5%	R 3019	$0.30	$0.25						

Ceramic Capacitors

Disc Ceramics are used whenever a low inductance is required eg. in RF circuits. All feature 5mm Leg Spacing. For tempco information, see data section

Cap Value	Volt WV	Tempco Type	Cat No.	Price each	Price 10 up	Cap Value	Volt WV	Tempco Type	Cat No.	Price each	Price 10 up
1.0pF	50	NPO	R 2215	$0.15	$0.10	150pF	50	Y5P	R 2289	$0.15	$0.10
1.5pF	50	NPO	R 2217	$0.15	$0.10	180pF	50	Y5P	R 2291	$0.15	$0.10
2.2pF	50	NPO	R 2219	$0.15	$0.10	220pF	50	Y5P	R 2293	$0.15	$0.10
2.7pF	50	NPO	R 2221	$0.15	$0.10	270pF	50	Y5P	R 2295	$0.15	$0.10
3.3pF	50	NPO	R 2223	$0.15	$0.10	330pF	50	Y5P	R 2296	$0.15	$0.10
3.9pF	50	NPO	R 2225	$0.15	$0.10	390pF	50	Y5P	R 2297	$0.15	$0.10
4.7pF	50	NPO	R 2227	$0.15	$0.10	470pF	50	Y5P	R 2299	$0.15	$0.10
5.6pF	50	NPO	R 2229	$0.15	$0.10	560pF	50	Y5P	R 2301	$0.15	$0.10
6.8pF	50	NPO	R 2231	$0.15	$0.10	680pF	50	Y5P	R 2303	$0.15	$0.10
8.2pF	50	NPO	R 2233	$0.15	$0.10	820pF	50	Y5P	R 2305	$0.15	$0.10
10pf	50	NPO	R 2235	$0.15	$0.10	0.001uF	50	Y5P	R 2307	$0.15	$0.10
12pF	50	NPO	R 2237	$0.15	$0.10	0.0022uF	50	Y5P	R 2309	$0.15	$0.10
15pF	50	NPO	R 2239	$0.15	$0.10	0.0033uF	50	Y5P	R 2311	$0.15	$0.10
18pF	50	NPO	R 2241	$0.15	$0.10	0.0047uF	50	Y5P	R 2313	$0.15	$0.10
22pF	50	NPO	R 2243	$0.15	$0.10	0.0056uF	50	Y5P	R 2315	$0.15	$0.10
27pF	50	NPO	R 2245	$0.15	$0.10	0.0068uF	50	Y5P	R 2317	$0.15	$0.10
33pF	50	NPO	R 2247	$0.15	$0.10	0.0082uF	50	Y5P	R 2319	$0.15	$0.10
39pF	50	NPO	R 2249	$0.15	$0.10	0.01uF	50	Y5P	R 2321	$0.15	$0.10
47pF	50	NPO	R 2251	$0.15	$0.10	0.022uF	50	Z5U	R 2323	$0.15	$0.10
56pF	50	NPO	R 2253	$0.15	$0.10	0.033uF	50	Y5P	R 2325	$0.15	$0.10
68pF	50	NPO	R 2257	$0.15	$0.10	0.047uF	50	Y5P	R 2327	$0.15	$0.10
82pF	50	NPO	R 2259	$0.15	$0.10	0.1uF	50	Y5P	R 2360	$0.15	$0.10
100pF	50	NPO	R 2285	$0.15	$0.10	0.22uF	25	Y5P	R 2370	$0.35	$0.25
120pF	50	Y5P	R 2287	$0.15	$0.10						

3kVDC High Voltage Ceramics



Suitable for high voltage DC circuit filtering, by-passing, etc.

Value	Tempco Type	Cat No.	Price 1 – 9	Price 10 up
100pF	Y5P	R 2375	$1.65	$1.16
120pF	Y5P	R 2376	$1.65	$1.16
150pF	Y5P	R 2378	$1.65	$1.16
180pF	Y5P	R 2380	$1.65	$1.16
220pF	Y5P	R 2381	$1.65	$1.16
270pF	Y5P	R 2382	$1.65	$1.16
330pF	Y5P	R 2383	$1.65	$1.16
390pF	Y5P	R 2384	$1.75	$1.23
470pF	Y5P	R 2386	$1.75	$1.23
560pF	Y5P	R 2387	$1.85	$1.30
680pF	Y5P	R 2388	$1.85	$1.30
820pF	Y5P	R 2389	$1.95	$1.37
0.001uF	Y5P	R 2390	$1.95	$1.37
0.0022uF	Z5U	R 2392	$1.95	$1.37
0.0033uF	Z5U	R 2393	$1.95	$1.37
0.0047uF	Z5U	R 2394	$1.95	$1.37
0.0056uF	Z5U	R 2395	$1.95	$1.37
0.0068uF	Z5U	R 2396	$1.95	$1.37
0.0082uF	Z5U	R 2398	$1.95	$1.37
0.01uF	Z5U	R 2400	$1.95	$1.37

Monolithic Multilayer Ceramics

Excellent stability in a small package with 5mm Leg Spacing. Applications: By-pass and filtering in power supplies & computers.

Value	Volt WV	Tempco Type	Cat No.	Price 1 – 9	Price 10 up
10pF	50	NPO	R 1981	$0.30	$0.21
15pF	50	NPO	R 1982	$0.30	$0.21
22pF	50	NPO	R 1983	$0.30	$0.21
33pF	50	NPO	R 1984	$0.30	$0.21
47pF	50	NPO	R 1985	$0.30	$0.21
56pF	50	NPO	R 2009	$0.30	$0.21
68pF	50	NPO	R 1986	$0.30	$0.21
100pF	50	NPO	R 1987	$0.30	$0.21
120pF	50	NPO	R 1988	$0.30	$0.21
150pF	50	NPO	R 1989	$0.35	$0.24
220pF	50	NPO	R 1990	$0.35	$0.24
330pF	50	NPO	R 1991	$0.40	$0.28
470pF	50	NPO	R 1994	$0.40	$0.28
680pF	50	NPO	R 1995	$0.45	$0.31
1000pF	50	X7R	R 1996	$0.30	$0.21
1500pF	50	X7R	R 1997	$0.30	$0.21
2200pF	50	X7R	R 1998	$0.30	$0.21
3300pF	50	X7R	R 1999	$0.30	$0.21
4700pF	50	X7R	R 2002	$0.30	$0.21
6800pF	50	X7R	R 2003	$0.30	$0.21
0.01uF	50	X7R	R 2000	$0.30	$0.21
0.015uF	50	X7R	R 2004	$0.35	$0.25
0.022uF	50	X7R	R 2005	$0.40	$0.28
0.033uF	50	X7R	R 2006	$0.40	$0.28
0.047uF	50	X7R	R 2007	$0.45	$0.35
0.068uF	50	X7R	R 2008	$0.50	$0.35
0.1uF	50	X7R	R 2001	$0.50	$0.25
0.15uF	50	Z5U	R 2180	$0.35	$0.24
0.22uF	50	Z5U	R 2181	$0.45	$0.31
0.33uF	50	Z5U	R 2182	$0.55	$0.39
0.47uF	50	Z5U	R 2183	$0.60	$0.42
0.68uF	50	Z5U	R 2184	$0.65	$0.46
1.0uF	25	Z5U	R 2185	$0.70	$0.50

Trimmer Capacitors

Range	Cat No.	1 – 9	10 up	Code
9.8-60pF	R 2930	$1.85	$1.30	Brown
3-28pF	R 2935	$1.85	$1.30	Red
1.8-22pF	R 2940	$1.95	$1.37	Green

** Limited stocks – not available in all stores.*

Variable Tuning Gang Capacitor

Used in AM receivers and transistor radio circuits.
Range: 60 – 160pF
Body Size: 20.2 x 20 x 10.5
Knob Diameter: 35.7mm
R 2970 **$1.58 ea for 10 or more**

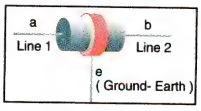
$2.25

High Discharge Capacitor

Suits heavy discharge currents circuits. Eg Strobes. Includes in-built discharge resistor. Non-polarised.
Value: 7.0uF
Voltage: 250VAC
R 2857 **$6.97 ea for 10 or more**

$9.95

Gaseous Arrestor



A 3-electrode, gas filled Surge Voltage Protector to reduce the effects of lightning strikes on phones and modems etc. See Data Section (page 233) Austel Certification: A90/ME/0041
R 1804 **$13.97 for 10 or more**

$19.95

Metal Oxide Varistors

Max Operating Voltage: 275VAC
Pulse Energy Rating: 20 Joules
Peak Pulse Current: 2000 Amps
Device Types: VE17M0275K, V275LA20A, TNR15G431K, INR14D431
R 1802 **$1.05 ea for 10 or more**

$1.50

General Purpose NTC Thermister

A Negative Temperature Coefficient sensor used in amplifiers and power supplies for temperature sensing and feedback.
Resistance @ 25°C = 100k, with a -5.2% change per°C.
Thermal Time Constant = 17 Seconds
Max. Dissipation = 0.5 Watt
Rating: -25/+125°C
R 1797

$1.75

1.0 Farad Double Layer

Compact Super Capacitor Known as a "Supercap" or "Dynacap", this is a high capacitance, low leakage, low ESR electrolytic capacitor used primarily in memory backup electronic equipment.
Rating: 1.0 Farad 5.5VDC
ESR @ 1kHz: 30Ω L.C.: 315uA
R 4900

NEW FOR '99

$19.95

Bipolar Transistors

Device	Type	Cat No.	1 – 9	10 up
BC327	PNP Signal	Z 2240	$0.35	$0.31
BC328	PNP Signal	Z 2242	$0.35	$0.31
BC337	NPN Signal	Z 2190	$0.35	$0.31
BC338	NPN Signal	Z 2252	$0.35	$0.31
BC546	NPN Signal	Z 1350	$0.30	$0.26
BC547	NPN Signal	Z 1300	$0.30	$0.24
BC548	NPN Signal	Z 1308	$0.30	$0.24
BC549	NPN Signal	Z 1319	$0.30	$0.24
BC549C*	NPN Low Noise SS	Z 1329	$0.40	$0.35
BC556	PNP Signal	Z 1352	$0.35	$0.30
BC557	PNP Signal	Z 1340	$0.30	$0.25
BC558	PNP Signal	Z 1348	$0.30	$0.25
BC559	PNP Signal	Z 1359	$0.30	$0.20
BC639	NPN Audio O/P	Z 1388	$0.75	$0.60
BC640	PNP Audio O/P	Z 1389	$0.75	$0.60
BD139	NPN Power Amp	Z 1443	$1.20	$1.02
BD140	PNP Power Amp	Z 1444	$1.20	$1.02
BD681	NPN Darlington	Z 1462	$2.35	$1.95
BD682	PNP Darlington	Z 1460	$2.35	$1.95
BF173*	NPN VHF Signal	Z 1562	$3.95	$2.80
BF463*	PNP Hi-Volt Power	Z 2040	$1.35	$1.14
BF469	NPN Hi-Volt Power	Z 1635	$2.00	$1.85
BF470	PNP Hi-Volt Power	Z 1636	$2.00	$1.85
BFR91	NPN UHF Signal	Z 1691	$2.20	$1.72
BUX80	NPN H-Current Pwr	Z 2150	$3.90	$3.50
MPSA14	NPN Darlington	Z 2086	$0.40	$0.35
MPSA65	PNP Darlington	Z 2088	$0.40	$0.35
MJE340	NPN Power	Z 2010	$2.50	$2.12
MJE350	PNP Power	Z 2012	$2.50	$2.12
MJ2955	PNP Power	Z 1800	$2.95	$2.35
MJE2955T	PNP Power	Z 2005	$1.95	$1.55
MJE3055T	NPN Power	Z 2008	$1.95	$1.55
MJ10012	NPN Darlington	Z 1805	$9.95	$7.96
MJ15003	NPN Power Amp	Z 1808	$9.95	$8.13
MJ15004	PNP Power Amp	Z 1810	$9.95	$8.13
PN100	NPN Small Signal	Z 1000	$0.30	$0.24
PN200	PNP Small Signal	Z 2000	$0.30	$0.24
PN3563	NPN Small Signal	Z 2180	$0.95	$0.74
PN4258*	PNP Sat Switch	Z 2326	$0.95	$0.74
TIP31B/C	NPN Power	Z 2020	$1.50	$1.19
TIP32B/C	PNP Power	Z 2024	$1.50	$1.19
PN2222	NPN Hi-Speed Sw	Z 2069	$0.35	$0.28
PN2907	PNP Hi-Speed Sw	Z 2065	$0.35	$0.28
2N3019	NPN HF Amp	Z 2068	$2.50	$1.99
2N3055	NPN Power Amp	Z 1804	$1.95	$1.55
2N3771*	NPN Power	Z 1910	$8.95	$7.32
2N3904	NPN Lo-Level Amp	Z 2070	$0.35	$0.28
2N3984*	NPN RF Power	Z 2260	$4.95	$3.90
2N4427*	NPN RF Power	Z 2506	$3.95	$3.14
2N5401	PNP Hi-Volt Sw	Z 1900	$0.85	$0.68
2SC710	NPN HF Signal	Z 2512	$0.95	$0.83
2SC3355	NPN 6.5GHz UHF	Z 6006	$3.00	$2.40
2SC1674	NPN 1.2GHz RF	Z 6005	$2.00	$1.61

Small Signal Field Effect Transistors (FETs)

Device	Type	Function	Cat No.	1 – 9	10 up
MPF102	N-Ch	Junction RF-VHF Amp	Z 1832	$1.50	$1.20
2N5245*	N-Ch	UHF/VHF Mixer	Z 2335	$2.95	$2.25
2N5484	N-Ch	Junction RF-VHF Amp	Z 2340	$0.95	$0.76
2N5486	N-Ch	Junction RF-VHF Amp	Z 2073	$2.00	$1.61
MOSFETS					
MTP/RFP3055E	N-Ch	60V 12A Power TMOS	Z 2132	$1.95	$1.56
BUZ71A	N-Ch	50V 14A Switch SIPMOS	Z 1850	$3.95	$3.17
IRF520*	N-Ch	100V 8A Switch HEXFET	Z 1860	$3.95	$3.17
BFR84*	N-Ch	VHF Dual Gate IGMOSFET	Z 1847	$3.95	$3.17
VN10KM	N-Ch	60V 1A Pulsed 0.31A** MOSFET	Z 1820	$3.00	$2.40
BUK456-60A/H	N-Ch	60V 52A Switch MOSFET	Z 1852	$9.95	$7.97
BUK457-600B*	N-Ch	600V 8A Switch MOSFET	Z 1854	$12.95	$10.37
MTP6N60E	N-Ch	600V 8A Switch MOSFET	Z 1855	$9.95	$7.97
2SK1068*	N-Ch	160V 7A Power MOSFET	Z 1822	$14.95	$11.95
2SJ162*	P-Ch	160V 7A Power MOSFET	Z 1824	$14.95	$11.95

*** Continuous*

For full Specifications see our Data Section

Signal Diodes

Characteristics	Type Each	Cat No.	Price 10 up	Price
Silicon 75V 200mA	IN4148/IN914	Z 3120	$0.10	$0.07
Silicon 75V 200mA	BAW62	Z 3245	$0.25	$0.20
Germanium Gold Bonded 25V 110mA	OA47	Z 3232	$3.00	$2.36
Germanium AM Signal Detector, 40V 50mA	1N60/1K60	Z 3040	$0.50	$0.40
Silicon Hot Carrier Schottky	5082-2800*	Z 3230	$3.00	$2.40
Silicon Varicap Double Diode	BB212	Z 3125	$6.00	$5.05

Rectifier Diodes

1A 400V, General Purpose	1N4004	Z 3204	$0.10	$0.06
1A 1000V, General Purpose	1N4007	Z 3207	$0.15	$0.10
3A 400V, General Purpose	1N5404	Z 3222	$0.30	$0.24
3A 1000V General Purpose	1N5408	Z 3228	$0.50	$0.40
6A 1000V, High Current	6A10/P600M	Z 3229	$1.30	$1.11
10A 600V Stud Mount, High Current	BYX98	Z 3243	$9.95	$8.46
1A 400V 200nS High Speed	1N4936	Z 3208	$1.00	$0.80
7A 400V 450nS Fast Speed*	BY229/400	Z 3241	$4.95	$4.08
1A 40V High Speed Schottky	1N5819	Z 3250	$0.45	$0.36
3A 40V High Speed Schottky	1N5822	Z 3252	$1.40	$1.12

Rectifier Bridges

1.5A 600V, 4-pin DIP pack	DB155G	Z 3300	$0.85	$0.68
1.5A 400V	WO4	Z 3304	$0.50	$0.43
2.0A 600V	2W06	Z 3308	$0.95	$0.76
6A 400V Medium Duty Power	P04	Z 3306	$1.95	$1.63
35A 400V Standard Power	KPBC3504	Z 3336	$4.95	$4.19
4A 1000V, 4-pin SIP pack	KBL407	Z 3310	$2.95	$2.37
8A 400V	KBPC804	Z 3333	$3.95	$3.17
50A 600V High Current	FB5006	Z 3350	$18.95	$16.11

Zener Diodes

Voltage	400mW	Cat No.	Price Each	Price 10 up	1 Watt	Cat No.	Price Each	Price 10 up
3.3V	1N4746A	Z 3401	$0.30	$0.24	1N4728	Z 3515	$0.35	$0.30
3.9V	-	-	-	-	1N4730	Z 3519	$0.35	$0.30
4.7V	1N750A	Z 3403	$0.30	$0.24	1N4732	Z 3523	$0.35	$0.30
5.1V	1N751A	Z 3406	$0.30	$0.24	1N4733	Z 3525	$0.35	$0.30
5.6V	1N752A	Z 3407	$0.30	$0.24	1N4734	Z 3527	$0.35	$0.30
6.2V	1N753A	Z 3409	$0.30	$0.24	1N4735	Z 3529	$0.35	$0.30
6.8V	1N754A	Z 3411	$0.30	$0.24	1N4736	Z 3531	$0.35	$0.30
7.5V	-	-	-	-	1N4737	Z 3533	$0.35	$0.30
8.2V	1N756A	Z 3414	$0.30	$0.24	1N4738	Z 3535	$0.35	$0.30
9.1V	1N757A	Z 3416	$0.30	$0.24	1N4739	Z 3537	$0.35	$0.30
10V	1N758A	Z 3413	$0.30	$0.24	1N4740	Z 3539	$0.35	$0.30
12V	1N759A	Z 3415	$0.30	$0.24	1N4742	Z 3543	$0.35	$0.30
15V	1N965A	Z 3417	$0.30	$0.24	1N4744	Z 3547	$0.35	$0.30
16V	-	-	-	-	1N4745	Z 3549	$0.35	$0.30
18V	-	-	-	-	1N4746	Z 3551	$0.35	$0.30
20V	-	-	-	-	1N4747	Z 3553	$0.35	$0.30
24V	-	-	-	-	1N4749	Z 3557	$0.35	$0.30
30V	-	-	-	-	1N4751	Z 3561	$0.35	$0.30
33V	-	-	-	-	1N4752	Z 3563	$0.35	$0.30

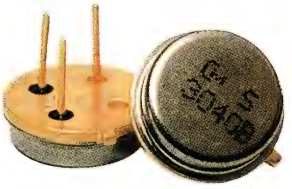
Unijunctions and DIACs

Function	Type	Case	Cat No.	Price Each	Price 10 up
Programmable Junction UJT	2N6037/D13T	T092	Z 1780	$1.35	$0.95
DIAC	BR100-03	SOT32	Z 4710	$1.00	$0.80

SAW Resonators

Surface acoustic wave resonators as used in wireless alarm transmitters, garage door remote controllers, oscillators, wireless, car alarm systems etc.

Frequency	Cat No.	Price Each	Price 10 up
303.8*	Z 2771	$0.95	$0.50
304.0*	Z 2772	$4.95	$4.50



SCRs and TRIACs

Voltage	Current	Models
200V	800mA	C103B, P0103, TS0820-20
30V	4A	C106Y*
400V	4A	C106D, TYN404
500V	8A	C122E, TYN608
400V	6A	BTB06-400BW, SC141D, BT137-500
600V	10A	BTA10-600B, T1013MJ, BT138X600G
400V	15A	BTB16-400BW, SC151D, BT169-600

Type	Case	Cat No.	Price Each	Price 10 up
SCR-Sensitive Gate	T092/T092A	Z 4310	$1.80	$1.50
SCR-Sensitive Gate	T0202	Z 4315	$1.75	$1.46
SCR-Sensitive Gate	T0126/T0202	Z 4320	$2.50	$2.08
SCR	T0220	Z 4332	$3.65	$3.06
TRIAC	T0220	Z 4510	$3.65	$2.47
TRIAC - Isolated tab	T0220	Z 4515	$4.95	$4.08
TRIAC	T0220	Z 4520	$4.95	$4.08

* *Not available in all stores*

Linear Devices

Function	Device	Case	Pin	Cat No.	Price Each	Price 10 up
Adj current source 1uA - 10mA	LM334Z	T092	3	Z 6810	$2.95	$2.51
Precision Temperature Sensor	LM335H	T046	3	Z 6050	$4.95	$3.80
Precision Temperature Sensor	LM335Z	T092	3	Z 6051	$3.95	$3.32
High Stable Reference Sensor	LM336Z*	T092	3	Z 6055	$3.00	$2.50
Ultramatched Transistor Pair	LM394CH*	DIP	8	Z 6083	$9.95	$9.00
PLL Tone Decoder	NE567*	DIP	8	Z 6167	$2.25	$1.88
8-bit D-A Converter	DCA0800*	DIP	16	Z 6834	$4.95	$4.21
8-bit A-D Converter	ADC0802*	DIP	20	Z 6833	$12.75	$15.60
8-bit Serial A-D Converter	ADC0831*	DIP	8	Z 6828	$4.95	$4.21
8-bit Serial A-D Converter TLC542	MC145041*	DIP	16	Z 6830	$5.95	$5.06
Waveform Function Generator	XR2206*	DIP	16	Z 6820	$14.00	$11.70
PLL/FSK Decoder	XR2211	DIP	14	Z 2511	$7.95	$6.50
Frequency to Voltage Converter	LM2917N	DIP	14	Z 6112	$5.00	$4.25
5 Monolithic NPN Transistor Array	LM3046*	DIP	14	Z 6107	$4.00	$3.35
Versatile TRIAC Driver	TLE3101*	DIP	18	Z 6150	$6.95	$5.95
LED Flasher / Oscillator	LM3909*	DIP	8	Z 6109	$2.65	$2.39
10 LED Dot/Bar Linear Display Driver	LM3914	DIP	18	Z 6295	$4.95	$4.21
10 LED Dot/Bar LOG Display Driver	LM3915*	DIP	18	Z 6297	$4.95	$4.21
12 LED Dot/Bar Driver with Peak Hold	LB1412*	DIP	22	Z 6291	$7.95	$6.37
Switchmode Power Supply Controller	uA78s40*	DIP	16	Z 6840	$4.95	$4.21

Comparators

General Purpose, Single Voltage	LM311	DIP	8	Z 6048	$1.60	$1.32
High Speed Dual Comparator	LM319	DIP	14	Z 6049	$2.95	$2.50
Ultra Low Power Quad	LM339	DIP	14	Z 6039	$1.50	$1.28

Power Amplifiers

1 Watt Stereo Amplifier IC	TDA2822	DIP	8	Z 6070	$3.95	$3.17
2.5W-5W Audio Amplifier IC	LM380N-14	DIP	14	Z 6080	$2.95	$2.47
0.3W-1W Low Voltage Amplifier IC	LM386N	DIP	8	Z 6086	$2.00	$1.70
7 Watt Audio Amplifier IC	LM383T*	T0220	5	Z 6085	$8.50	$7.23
20 Watt Low Distortion Amplifier IC	LM1875T	T0220	5	Z 6115	$9.95	$8.42
50 Watt Hi Fi Power Amplifier IC	TDA1514*	SOT1319		Z 6117	$9.95	$8.55
50 W Audio Power Amp (National)	LM3876*	T0220	11	Z 6119	$12.95	$11.01

Timers

Single TTL 555 (NE555)	LM555CN	DIP	8	Z 6145	$0.95	$0.49
Single CMOS 555 (TL555CP)	ICM7555	DIP	8	Z 6144	$2.95	$1.70
Dual TTL 555 (NE556)	LM556CN	DIP	14	Z 6146	$1.65	$0.73

Radio/TV/RF

AM Radio Receiver IC	MK484	T092	3	Z 6525	$2.15	$1.79
PAL/NTSC Colour Encoder	MC1377	DIP	20	Z 6530	$4.95	$4.19
FM Stereo Transmitter	BA1404*	DIP	18	Z 6019	$4.95	$4.51
Triple VHF ECL Differential Amp	MC10116E*	DIP	16	Z 5415	$2.95	$1.98
CQUAM AM Stereo Decoder	MC13020*	DIP	20	Z 5420	$0.25	$0.23
1GHz Wideband Amplifier	upc1688G	SMD	4	Z 6011	$3.95	$3.17

Voltage Regulator IC

Voltage	Current	Type	Case	Cat No.	Price Each	Price 10 up
0V to +40V	25mA	LM304*	10-pin CAN	Z 6546	$0.25	$0.23
+1.2V to +37V	1.5A	LM317K*	T03	Z 6542	$7.95	$5.10
+1.2V to +37V	1.5A	LM317T	T0220	Z 6541	$1.95	$1.15
-1.2V to -37V	1.5A	LM337T	T0220	Z 6058	$2.95	$2.47
+1.2V to +32V	1.5A	LM2941CT	T0220	Z 6620	$3.95	$3.17
+1.2V to +32V	3A	LM350T	T0220	Z 6561	$7.95	$6.76
+2.0V to +37V	150mA	LM723	14-pin DIP	Z 6362	$1.80	$1.53
+5V	100mA	78L05CZ	T092	Z 6108	$0.95	$0.59
+5V	500mA	78M05CT	T0220	Z 6543	$0.65	$0.59
+5V	1A	7805CT/CV	T0220	Z 6545	$1.25	$1.13
+5V LDO	1A	LM2940T-5*	T0220	Z 6600	$2.95	$2.37
+8V	1A	7808CT/CV	T0220	Z 6553	$1.25	$1.13
+9V	1A	7809CT/CV	T0220	Z 6550	$1.25	$1.13
+9V LDO	1A	LM2940T-9*	T0220	Z 6602	$2.95	$2.37
+12V	100mA	78L12CZ	T092	Z 6110	$1.85	$1.15
+12V	1A	7812CT/CV	T0220	Z 6552	$1.25	$1.13
+12V LDO	1A	LM2940T-12*	T0220	Z 6606	$2.95	$2.37
+15V	100mA	78L15CZ	T092	Z 6111	$1.85	$1.20
+15V	1A	7815 CT/CV	T0220	Z 6554	$1.25	$1.13
-5V	1A	7905CT	T0220	Z 6555	$1.25	$1.13
-12V	1A	7912CT	T0220	Z 6556	$1.25	$1.13
-15V	1A	7915CT	T0220	Z 6557	$1.25	$1.13

74 TTL Series (+5V Supply)

Device	Function	Pins	Cat No.	1 – 9	10 up
7490	Decade Counter	14	Z 5210	$1.80	$1.45
74123*	Retriggerable Monostable Multivibrator	16	Z 5263	$0.40	$0.40

74LS Low Power Schottky Series (+5V Supply)

Device	Function	Pins	Cat No.	1 – 9	10 up
74LS00	Quad 2-Input +ve NAND Gate	14	Z 4900	$0.80	$0.68
74LS01	Quad 2-Input NAND Gate OC	14	Z 4901	$0.80	$0.64
74LS02	Quad 2-Input NOR Gate	14	Z 4902	$0.80	$0.64
74LS04	Hex Inverter	14	Z 4904	$0.95	$0.69
74LS05	Hex Inverter, Open Collector	14	Z 4905	$0.70	$0.56
74LS08	Quad 2-Input AND Gate	14	Z 4908	$1.20	$0.87
74LS10	Triple 3-Input NAND Gate	14	Z 4910	$1.20	$0.87
74LS11	Triple 3-Input AND Gate	14	Z 4912	$1.20	$0.87
74LS13	Dual Input NAND Schmitt Trigger	14	Z 4913	$0.95	$0.69
74LS14	Hex Schmitt Trigger / Inverter	14	Z 4914	$1.20	$0.99
74LS20	Dual 4-Input NAND Gate	14	Z 4920	$0.70	$0.56
74LS21	Dual 4-Input +ve AND Gate	14	Z 4924	$0.75	$0.60
74LS27	Triple 3-Input +ve NOR Gate*	14	Z 4927	$0.70	$0.56
74LS30	8-Input +ve NAND Gate	14	Z 4930	$0.75	$0.60
74LS31	Delay Elements*	14	Z 4931	$1.00	$0.98
74LS37	Quad 2-Input NAND Buffer	14	Z 4937	$0.95	$0.63
74LS47	BCD-7 Segment Decoder/Driver	16	Z 4947	$1.10	$0.88
74LS54	4-Wide AND-OR Inverter*	14	Z 4954	$0.75	$0.60
74LS73	Dual J/K Flip Flop -ve Edge Trigger	14	Z 4973	$1.95	$1.50
74LS75	4-bit Bristable Latch	16	Z 4975	$1.50	$1.18
74LS83	4-bit Binary Adders with Fast Carry	16	Z 4983	$1.95	$1.55
74LS85	4-bit Magnitude Comparator	16	Z 4985	$1.70	$1.36
74LS86	Quad 2-Input Exclusive-OR Gate	14	Z 4986	$0.70	$0.56
74LS90	Decade (1-10) Counter*	14	Z 4990	$0.95	$0.75
74LS95	4-bit Parallel Access Shift Registor	14	Z 4995	$1.95	$1.75
74LS109	Dual J/K Flip Flop +ve Edge Trigger*	16	Z 5109	$0.70	$0.56
74LS123	Retriggerable M/S Multivibrator*	16	Z 5310	$1.85	$1.23
74LS132	Quad 2-Input NAND Schmitt Trigger*	14	Z 5283	$0.95	$0.76
74LS138	1 of 8 Line Decoder/Demultiplexer	16	Z 5284	$1.95	$1.55
74LS139	2 to 4 Line Decoder/Demultiplexer	16	Z 5285	$0.95	$0.76
74LS153	Dual 4 Input Multiplexer	16	Z 5286	$0.95	$0.73
74LS157	Quad 2-Input Multiplexer Non-Invert	16	Z 5287	$0.95	$0.76
74LS165	8-bit Parallel Shift Register	16	Z 5288	$1.25	$1.00
74LS174	Hex D-type Flip Flop*	16	Z 5290	$0.95	$0.76
74LS175	Hex/Quad D-type Flip Flop*	16	Z 5291	$0.95	$0.76
74LS190	Up/Down Decade Counter*	16	Z 4999	$0.85	$0.77
74LS191	Synch Up/Down Binary Counter*	16	Z 5191	$0.95	$0.76
74LS192	Synch BCD Decade U/D Counter*	16	Z 5192	$0.95	$0.76
74LS193	Synch 4-bit U/D Counter Dual Clock	16	Z 5193	$1.65	$1.31
74LS196	Presettable Binary/Decade Counter*	14	Z 5196	$0.95	$0.79
74LS221	Dual M/Stable Multivibrator	16	Z 5296	$1.50	$1.20
74LS240	Octal Tri-State Buffer, Inverting*	20	Z 5298	$0.75	$0.60
74LS241	Octal Tri-State Buffer, Non-Inverting*	20	Z 5293	$0.85	$0.68
74LS244	Octal Tri-State Buffer/Line Driver	20	Z 5294	$1.20	$0.96
74LS245	Octal Bus Transmitter/Receiver*	20	Z 5299	$0.85	$0.77
74LS367	Hex Tri-State Buffer*	16	Z 5292	$1.50	$1.22
74LS373	Octal Tri-State Latch*	20	Z 5295	$0.90	$0.81
74LS374	Octal 3-State F/Flop +ve Edge Trig	20	Z 5297	$1.50	$1.20

74C CMOS Series (+3V tp +5V Supply)

Device	Function	Pins	Cat No.	1 – 9	10 up
74C00	Quad 2-Input NAND Gate*	14	Z 5410	$1.00	$0.81
74C14	Hex Schmitt Trigger/Inverter (40106)	14	Z 5413	$1.95	$1.55
74C175	Quad-D Flip Flop (40175)	16	Z 5695	$1.95	$1.55
74C926	4-Digit Counter w 7-Segment Driver	18	Z 5414	$19.95	$15.35

74HC High Speed CMOS Series (+5V Supply)

Device	Function	Pins	Cat No.	1 – 9	10 up
74HC00	Quad 2-Input +ve NAND Gate*	14	Z 5800	$1.00	$0.80
74HC02	Quad 2-Input NOR Gate*	14	Z 5802	$0.85	$0.68
74HC04	Hex Inverter	14	Z 5804	$0.95	$0.76
74HC08	Quad 2-Input AND Gate	14	Z 5808	$0.95	$0.76
74HC10	Triple 3-Input NAND Gate*	14	Z 5810	$0.90	$0.72
74HC11	Triple 3-Input AND Gate	14	Z 5811	$0.90	$0.72
74HC14	Hex Schmitt Trigger/Inverter	14	Z 5814	$1.30	$1.04
74HC27	Triple 3-Input +ve NOR Gate	14	Z 5817	$0.90	$0.72
74HC30	8-Input +ve NAND Gate	14	Z 5830	$0.90	$0.72
74HC32	Quad 2-Input +ve OR Gate	14	Z 5832	$0.95	$0.76
74HC74	Dual J/K Flip Flop +ve Edge Trigger*	14	Z 5874	$0.95	$0.76
74HC76	Dual J/K Master/Slave Flip Flop*	16	Z 5876	$0.95	$0.76
74HC85	4-bit Magnitude Comparator	16	Z 5885	$1.95	$1.56
74HC86	Quad 2-Input Exclusive OR-Gate*	14	Z 5886	$1.20	$0.96
74HC123	Retriggerable M/S Multivibrator	16	Z 5910	$2.90	$2.33
74HC132	Quad 2-Input NAND Schmitt Trigger	14	Z 5912	$1.95	$1.56
74HC138	1 of 8 Line Decoder/Demultiplexer	16	Z 5915	$1.90	$1.52
74HC139	Dual 2 to 4 Decoder/Demultiplexer	16	Z 5920	$1.95	$1.56
74HC154	4 to 16 Decoder/Demultiplexer	24	Z 5924	$2.95	$2.37
74HC157	Quad 2 to 1 Multiplexer	16	Z 5925	$1.35	$1.08
74HC161	Presettable Binary Counter	16	Z 5929	$2.00	$1.61
74HC165	8-bit Parallel-Serial Shift Register	16	Z 5930	$1.95	$1.56
74HC174	Hex D-Flip Flop with Clear	16	Z 5935	$1.95	$1.56
74HC193	Synch U/D Binary Counter, Dual Clock	16	Z 5939	$2.70	$2.17
74HC194	4-bit Uni Bidirectional Shift Register*	16	Z 5941	$1.95	$1.56
74HC221	Dual Monostable M/Vib Schmitt Input	16	Z 5940	$2.95	$2.37
74HC240	Octal Tri-State Inverting Buffer	20	Z 5945	$2.00	$1.61
74HC244	Octal Tri-State Buffer/Line Driver	20	Z 5950	$1.90	$1.52
74HC245	Octal Tri-State 2-Way Buffer	20	Z 5955	$2.70	$2.17
74HC367	Hex Bus Tri State Buffer*	16	Z 5960	$1.95	$1.56
74HC373	Octal Tri-State D-type Latch	20	Z 5965	$2.60	$2.09
74HC393	Dual 4-bit Binary Counter*	14	Z 5974	$1.95	$1.56
74HC595	8-bit Parallel-Serial Shift Regiater	16	Z 5982	$2.95	$2.37
74HC4066	Quad Analog Switch	14	Z 5990	$2.00	$1.61

4000 CMOS Logic Series (+3V to +5V Supply)+

Device	Function	Pins	Cat No.	1 – 9	10 up
4001	Quad 2-Input NOR Gate	14	Z 5601	$0.85	$0.68
4002	Dual Quad Input NOR Gate	14	Z 5602	$1.30	$1.04
4007	Dual Complementary Pair & Inverter	14	Z 5607	$1.80	$1.45
4009	Hex Inverter Buffer	16	Z 5609	$1.40	$1.12
4011	Quad 2-Input NAND Gate	14	Z 5611	$1.00	$0.80
4012	Dual 4-Input NAND Gate	14	Z 5612	$0.85	$0.68
4013	Dual D Edge Triggered Flip Flop	14	Z 5613	$0.95	$0.76
4015	Dual 4-bit Shift Register	16	Z 5615	$1.50	$1.20
4016	Quad Bilateral Switch	14	Z 5616	$1.50	$1.20
4017	5-Stage Decade Counter/Divider	16	Z 5617	$1.85	$1.49
4019	Quad 2-Input Multiplexer	16	Z 5619	$1.30	$1.04
4020	14-Stage Binary Ripple Counter	16	Z 5620	$1.80	$1.45
4021	8-bit Shift Register	16	Z 5621	$1.90	$1.52
4022	1 of 8 Counter	16	Z 5622	$1.70	$1.37
4023	Triple 3-Input NAND Gate	14	Z 5623	$1.80	$1.45
4024	7-Stage Binary Ripple Counter	14	Z 5624	$1.20	$0.96
4025	Triple 3-Input NOR Gate	14	Z 5625	$0.95	$0.76
4026	7-Segment Driver/Decade Counter	16	Z 5626	$2.95	$2.37
4027	Dual J/K Flip Flop	16	Z 5627	$1.30	$1.04
4028	4-bit BCD to 1-of-10 Decoder	16	Z 5628	$1.95	$1.56
4029	4-bit/BCD U/D Parallel-in Counter	16	Z 5629	$1.70	$1.37
4030	Quad Exclusive OR Gate	14	Z 5630	$1.30	$1.04
4040	12-Stage Binary Ripple Counter	16	Z 5640	$1.50	$1.20
4044	Quad R/S Latch, O/C Output	16	Z 5644	$2.70	$2.17
4046	Phase Locked Loop	16	Z 5646	$1.95	$1.56
4047	Mono/Astable Multivibrator*	14	Z 5647	$1.95	$1.56
4049	Hex Inverting Buffer	16	Z 5649	$1.30	$1.04
4050	Hex Non-Inverting Buffer	16	Z 5650	$0.80	$0.64
4051	8-Channel Analogue Switch	16	Z 5651	$1.80	$1.45
4060	14-Stage Binary Counter/Divider	16	Z 5660	$1.95	$1.56
4066	Quad Bilateral Analogue Switch	14	Z 5666	$1.35	$1.08
4069	Hex Inverter	14	Z 5669	$0.95	$0.76
4071	Quad 2-Input OR Gate	14	Z 5671	$1.10	$0.88
4081	Quad 2-Input Buffered AND Gate	14	Z 5681	$1.20	$0.96
4082	Dual Quad Input AND Gate	14	Z 5682	$1.40	$1.12
4093	Quad 2-Input NAND Schmitt Trigger	14	Z 5693	$1.50	$1.20
4094	8-Stage Shift/Store Register	16	Z 5692	$1.95	$1.56
4511	BCD 7-Segment Decoder Driver	16	Z 5730	$1.95	$1.56
4514	4 to 16 Line Decoder	24	Z 5737	$3.95	$3.17
4516	Binary Up/Down Counter	16	Z 5738	$2.95	$2.37
4518	Dual BCD Up/Down Counter	16	Z 5740	$1.95	$1.56
4520	Dual Binary Up/Down Counter	16	Z 5742	$2.30	$1.84
4526	Binary Divide-by-N Counter*	16	Z 5744	$2.95	$2.37
4528	Dual Monostable Multivibrator	16	Z 5748	$1.30	$1.04
40194	4-bit Bidirectional Shift Register*	16	Z 5694	$1.95	$1.56

+ *See B 1010 on Page 197 for 4000 Series Pinouts.*

Operational Amplifiers (Op-Amps)

Device	Function	Pins	Cat No.	1 – 9	10 up
LM10CLN	Low Voltage Comp with Reference*	8	Z 6084	$4.85	$3.89
TL071CP	JFET/Bipolar Compensated	8	Z 6030	$1.95	$1.56
TL072CP	Dual JFET/Bipolar Compensated	8	Z 6032	$2.95	$2.37
TL074CP	Quad JFET/Bipolar Compensated	14	Z 6034	$2.95	$2.37
LF351	JFET/Bipolar Compensated*	8	Z 6384	$0.95	$0.76
TLC251	CMOS Low Voltage/Power	8	Z 6021	$3.95	$3.17
LM301AN	General Purpose Uncompensated*	8	Z 6040	$1.50	$1.20
LM308N	Precision Uncompensated*	14	Z 6045	$1.60	$1.28
LM324N	Quad Low Power Compensated	14	Z 6102	$1.40	$1.11
LM328N	Dual Low Power Compensated	8	Z 6029	$1.60	$1.28
LM614	Quad GP Comp with Adj Reference	16	Z 6375	$3.95	$3.17
LM741	General Purpose Uncompensated	8	Z 6382	$1.25	$1.00
LM833N	Dual Low Noise Hi Fi Audio Comp	8	Z 6088	$2.40	$1.93
LM1458N	Dual GP Compensated*	8	Z 6028	$1.70	$1.37
CA3080	Dual Transconductance	8	Z 6024	$3.85	$3.09
CA3130T	MOSFET Uncompensated (T05)*	8	Z 6025	$2.95	$2.66
CA3130E	MOSFET/Bipolar Compensated DIP	8	Z 5417	$3.50	$2.80
CA3140E	MOSFET (741 Pin Compatible)	8	Z 5419	$3.95	$3.17
LM3900N	Norton Quad Current Differencing*	14	Z 6100	$1.80	$1.45
NE5534P	Low Noise, High Output	8	Z 6090	$3.95	$3.17
LM1360N	Dual Transconductance with Buffers*	16	Z 6113	$4.95	$3.96
LM627CN	Precision Low Noise	8	Z 6023	$4.95	$3.96

* *Limited Stocks – not available in all stores*

Special Function

Device	Function	Pin No	Cat No.	Price 1 – 4	Price 5 up
MAX232	RS232 Transceiver	16	Z 5369	$9.95	$7.97
DS1488	RS232 Quad Line Driver	14	Z 5370	$2.00	$1.61
DS1489	RS232 Quad Line Receiver	14	Z 5371	$2.00	$1.61
PC16550	Fast UART with Buffer*	40	Z 9117	$14.95	$13.45
ICL/UMC7106	3.5 Digit LCD Display/Driver	40	Z 6300	$5.00	$4.00
uln2003	7 Way Darlington Driver	16	Z 5380	$3.95	$3.17
uln2803	8 Way Darlington Driver	18	Z 6282	$4.95	$3.96
MC145026P	9 bit Trinary Security Encoder	16	Z 5425	$3.85	$3.09
MC145028P	9 bit Trinary Security Decoder	16	Z 5430	$4.95	$3.96
MC145436P	DTMF Decoder	14	Z 5460	$9.95	$7.97
um3561A	Siren/Sound Generator	8	Z 6203	$3.25	$2.61
um66T0-9*	Wedding March Melody	3	Z 6214	$0.95	$0.76
um66T-33*	Mary Had a Little Lamb Melody	3	Z 6219	$0.95	$0.76
ugn3503U	Hall Effect Sensor	3	Z 2620	$3.50	$2.98
OM1631C	Car Alarm in one IC	18	Z 6190	$7.95	$7.25
SAB6456	1GHz Prescaler IC*	8	Z 9125	$4.95	$3.96
Z80A*	4MHz 8 bit CPU	40	Z 9100	$5.00	$4.00

EPROMS and SRAMS

2732*	4K x 8 (64K) EPROM	250nS	Z 9209	$7.95	$6.79
27C256-12	32k x 8 (256k) EPROM	120nS	Z 9355	$11.50	$10.22
27C512-12	64k x 8 (512k) EPROM	120ns	Z 9358	$12.95	$11.42
27C1001-12	128 x 8 (1Mb) EPROM	120nS	Z 9360	$14.95	$11.97
6116LP-4*	2k x 8 SRAM	200nS	Z 9308	$3.95	$3.17

Customer Note: Some stores still carry hard to get DRAM and other memory devices at very low prices. Please check with your local Dick Smith Electronics store for stock.

Crystals

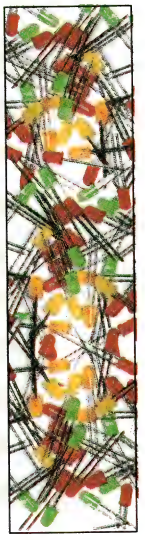
Frequency	Case	Resonance	Cat No.	Price 1 – 9	Price 10 up
38kHz*	DT38	Parallel	Z 6018	$3.95	$3.17
3.579545MHz	HC49/U	Parallel	Z 6031	$3.95	$3.17
2.0MHz*	HC49/U	Parallel	Z 9098	$3.95	$3.17
4.0MHz	HC49/U	Parallel	Z 9900	$3.95	$3.17
10.0MHz	HC49/U	Parallel	Z 9910	$3.95	$3.17

** Limited stocks. May not be available in all stores.*

Optoelectronics

LEDs and LED Accessories

Emitted Colour		Cat No.	Price 1 – 9	Price 10 up
3mm Round Premium Quality				
Red	2mcd	Z 4077	$0.30	$0.24
Green	6mcd	Z 4079	$0.30	$0.25
Yellow	5mcd	Z 4081	$0.30	$0.25
Orange	5cmd	Z 4083	$0.30	$0.25
5mm Round Premium Quality				
Red	3mcd	Z 4085	$0.35	$0.25
Green	10mcd	Z 4087	$0.35	$0.25
Yellow	8mcd	Z 4089	$0.35	$0.25
Orange	10mcd	Z 4091	$0.35	$0.25
10mm Round Premium Quality				
Red	40mcd	Z 4060	$0.70	$0.60
Green	40mcd	Z 4061	$0.70	$0.60
Yellow	40mcd	Z 4062	$0.70	$0.60
2mm x 5mm Rectangular with Thick Collar				
Red*	0.4mcd	Z 4093	$0.30	$0.26
Yellow*	1.1mcd	Z 4097	$0.30	$0.26
2mm x 5mm Rectangular with Thin Collar				
Red	5.1mcd	Z 4200	$0.35	$0.28
Green	4.3mcd	Z 4202	$0.35	$0.28
Yellow	4.0mcd	Z 4204	$0.35	$0.28



High Intensity/High Brightness

Emitted Colour	Lens Size	Type	Intensity	Ø1/2**	Cat No.	Price 1 – 9	Price 10 up
Red	5mm	Clear	1000mcd	12°	Z 4072	$0.75	$0.68
Ruby Red	5mm	Clear	3600mcd	12°	Z 4074	$1.30	$1.17
Sunset Red	5mm	Clear	8000mcd	15°	Z 4031	$2.00	$1.61
Yellow	5mm	Clear	5000mcd	8°	Z 4009	$1.85	$1.65
Amber Yellow	5mm	Clear	6500mcd	15°	Z 4033	$2.00	$1.61
Green	5mm	Clear	2200mcd	30°	Z 4008	$7.65	$6.89
Green	5mm	Clear	6000mcd	15°	Z 4011	$8.95	$7.16
Blue	5mm	Clear	650mcd	30°	Z 4006	$6.95	$6.26
Blue	5mm	Clear	1000mcd	24°	Z 3900	$7.50	$6.75
White*	3mm	Clear	600mcd	30°	Z 4001	$5.90	$5.61
White*	5mm	Clear	650mcd	15°	Z 4002	$6.90	$6.21
White	5mm	Clear	1100mcd	50°	Z 4003	$9.85	$7.95
White	5mm	Clear	4000mcd	20°	Z 4004	$9.95	$7.97
Red*	10mm	Clear	3000mcd	30°	Z 4066	$1.25	$1.10
Red	10mm	Clear	6000mcd	12°	Z 4067	$2.00	$1.61

Special Function

Blue*	3mm	Clear	7mcd	Z 4092	$2.20	$1.98
Blue*	5mm	Diffused	3mcd	Z 4005	$2.20	$1.98
Red Flashing 3V	5mm	Diffused	30mcd	Z 4040	$1.35	$1.15
Red Flashing 12V	5mm	Diffused	280mcd	Z 4044	$1.65	$1.48
Green Flashing 3V*	5mm	Diffused	3.5mcd	Z 4042	$1.35	$1.15
Green Flashing 12V	5mm	Diffused	69mcd	Z 4046	$1.65	$1.48

**Limited Stocks – not available in all stores* ***Ø1/2 = Viewing Angle*

Special Function – continued

Red & Green	5mm	Milk White 45/11mcd		Z 4071	$0.85	$0.68
Infrared Transmitter	5mm	Smoke		Z 3235	$1.30	$1.10

Panel & Bar Graph Indicators

Red Dot Round	2mm x 4.5mm	Diffused	1.3mcd	Z 4190	$0.25	$0.20
Red Dot Round	3mm x 6mm	Diffused	1.7mcd	Z 4194	$0.30	$0.24
Green Dot Round	2mm x 4.5mm	Diffused	1.3mcd	Z 4192	$0.25	$0.20
Green Dot Round	3mm x 6mm	Diffused	1.7mcd	Z 4196	$0.30	$0.24
Red 10 Segment	Vertical Bargraph			Z 4180	$2.95	$2.66
Green 10 Segment	Vertical Bargraph			Z 4182	$2.95	$2.66
Green 7 Segment	Horizontal Bargraph			Z 4184	$2.95	$2.66

7 Segment LED Displays

Digit Colour & Size			Cat No.	Price 1 – 9	Price 10 up
Common Anode					
Red	7.6mm	LT312*	Z 4117	$2.85	$2.57
Red	7.6mm	30240A	Z 4118	$2.85	$2.57
Red	13.2mm	LTS546	Z 4145	$2.85	$2.57
Common Cathode					
Red	7.6mm	LT313	Z 4103	$2.85	$2.57
Green	7.6mm	LT313G	Z 4105	$3.50	$3.15
Red	12.7mm	LTL5303 (FND560 Type)	Z 4150	$2.85	$2.57
Orange	13.2mm	LTS5503AE	Z 4151	$3.50	$3.15

Liquid Crystal Display 4.5 Digit 10mm* Z 4175 $12.95 $11.01

Phototransistors, Photodiodes, LDRs

Device Type	Function	Cat No.	Price 1 – 4	Price 5 up
DSCD01	Light Dependent Resistor, CdS	Z 4801	$2.20	$1.98
LTE4208	Infrared Transmitting Diode	Z 3235	$1.30	$1.10
LTR53A	Infrared Receiving Diode	Z 1956	$2.95	$2.66
U612*	I/R Receiver Subsystem with Lens	Z 1954	$4.95	$4.46
U60	I/R receiver Subsystem Buffered	Z 1955	$5.95	$4.77
T381	Darlington Phototransistor, 3mm	Z 1951	$2.00	$1.80

Optoisolators/Optocouplers

4N25/4N28	Standard LED Photodiode	Z 4804	$1.85	$1.57
H11AZ*	Standard, 4N25 equivalent	Z 4810	$1.25	$1.10
6N138*	Fast data transfer suit MIDI	Z 4808	$3.30	$2.97
SFH601-3*	Siemens high speed transfer ratio	Z 9023	$2.95	$2.67
MOC/CP 3021	Optoisolated TRIAC driver	Z 4516	$3.50	$3.15

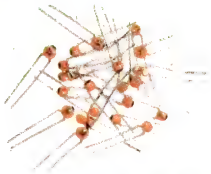
LED Bezels and Mounting Hardware

3mm Round Clip-on, 15 Piece Pack	H 1933	$2.25	$2.14
5mm Round Clip-on, 15 Piece Pack	H 1934	$2.25	$2.14
5mm Round Bezel & Collar, 15 Piece Pack	H 1910	$2.75	$2.61
5mm Round Right Angle Mount, 10 Piece Pack	H 1931	$1.95	$1.85
5mm Rect LED Bezel, 10 Piece Pack	H 1935	$3.25	$3.09

Need more data?
Check out our Data Section at the back of this catalogue.

Capacitors

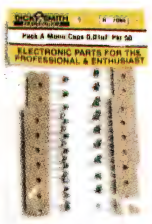
60 Piece Ceramic Pack



Quality 50V Ceramic capacitors in selected common values.
R 7050

$4.95 pk

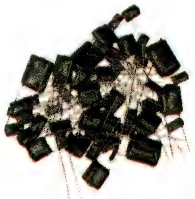
50 Piece Monolithic Ceramic Pack



High stability 0.01uF and 0.1uF 50V used in by-pass and coupling circuits.

0.01uF	R 7060	**$5.95pk**
0.1uF	R 7062	**$9.95pk**

60 Piece Greencap Pack



5% 100WV Polyester capacitors in selected commonly used values.
R 7040

$6.95 pk

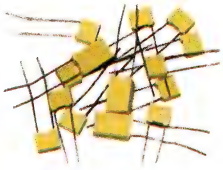
50 Piece Greencap Budget Packs

5% 100WV Polyester capacitors in value range packs.

Pack	Value Range	Cat No.
Pack A	0.001 – 0.022uF	R 7041
Pack B	0.0027 – 0.056uF	R 7042
Pack C	0.068 – 0.015uF	R 7043
Pack D	0.018 – 0.039uF	R 7044
Pack E	0.047 – 0.1uF	R 7045

$5.95 pk

65 Piece MKT Polyester Pack



5% 100WV MKT capacitors all in 5.08mm standard Leg Spacing.
R 7070

$16.95 pk

55 Piece Electrolytic Capacitor Pack

Quality RB Electrolytics from 2.2uF to 470uF and in 10V to 25V in a value savings pack. All are rated at 85°C.
R 7030

$7.95 pk

100 Piece Electrolytic Capacitor Pack

Mixed RB Electrolytics from 0.1uF to 100uF and in mixed voltages up to 50V for great value. All are rated at 85°C.
R 7037

$14.95 pk

Carbon Film Resistors

300 Piece 1/4 Watt Pack

Computer selected 300 pieces in 50 different values for versatility. Quality 5% types – our most popular resistor pack of over 20 years – in a value priced pack.
R 7010

$4.95 pk

1/4 W Budget Packs

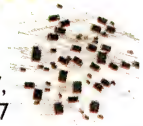
Carbonfilm resistors in selected value range packs at an affordable price.

Pack	Value Range	Pieces	Cat No.
Pack A	0 – 8.2 Ohms	130	R 7100
Pack B	10 – 82 Ohms	120	R 7102
Pack C	100 – 820 Ohms	120	R 7104
Pack D	1k – 8.2kOhms	120	R 7106
Pack E	10k – 82k Ohms	120	R 7108
Pack F	100k – 820k Ohms	120	R 7110
Pack G	1M – 10Mohms	130	R 7112

$2.95 pk

Semiconductors

100 Piece Signal Transistors



Each pack has: 20 of each BC547, BC548, BC549, 15 of each BC557 & BC558 & 10 of BC559.
Z 3000

$11.95 pk

50 Piece Signal Transistors

1/2 size pack consisting of: 11 of each BC547, BC548, BC549, 6 of each BC557 & BC558 and 5 of BC559.
Z 3002

$6 pk

5 Piece Phototransistors

Each pack has 5 standard Fairchild phototransistors, including data. Ideal for experimenters, hobbyists and students.
Z 3022

$3.95 pk

Power Diode and SCR Pack

Each 57 piece pack comes with 10 x 1N4004, 10 x 1N4007, 10 x 1N5404, 10 x 1N5408, 2 x W04, 3 x C106D (or C106Y) and 2 x C122E.
Z 3010

$16.95 pk

100 Piece Rectifier Diode Pack

This contains 100 pieces x 400V 1A 1N4004 rectifier diodes.
Z 3008

$3.95 pk

50 Piece 1N4004 Diode Pack

As above but in a smaller quantity.
Z 2012

$2 pk

100 Piece Mixed

Signal Diode Pack Each pack contains: 25 x 1N60, 5 x 0A47,and 70 x 1N4148.
Z 3005

$14.95 pk

Premium 5mm LED Pack

100 Piece Red LED Pack

High efficiency quality 5mm rounded LEDs with consistent colour and illumination.
Z 4084

$19.95 pk

50 Piece Red LED Pack

Same high quality as above but in a smaller quantity pack.
Z 3011

$10 pk

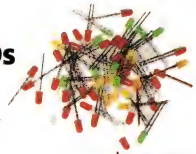
Assorted 5mm LED Packs

100 Piece Mixed Colour Round LEDs

Premium quality mixed colour LED pack with 60 x Red, 20 x Green, 10 x Yellow and 10 x Orange.
Z 3015

$18.95 pk

50 Piece Mixed Colour Round LEDs



Quality LEDs as above in half the quantity but in the same value saving pack.
Z 3018

$9.95 pk

High Output 5mm Round LED Packs Pack of 50

Red luminous intensity: 90mcd
Viewing angle: 40°
Forward voltage: 2VDC
Forward current: 25mA
Dominant wavelength: 621nm
Z 7060

$8.75 pk

Pack of 50 Green

Luminous Intensity: 60mcd
Viewing angle: 40°
Forward voltage: 2.1VDC
Forward current: 25mA
Dominant wavelength: 569nm
Z 7064

$8.75 pk

Pack of 50 Yellow

Luminous intensity: 40mcd
Viewing angle: 40°
Forward voltage: 2.1VDC
Forward current: 25mA
Dominant wavelength: 588nm
Z 7068

$8.75 pk

We have great discounts on bulk purchases. Please ask our sales staff for details.

TV Cable

TV Ribbon Cable

300 Ohm ribbon cable for connecting antennas to TV sets. Suitable for shorter runs.
Black W 2070 **40¢/m**

TV Ribbon Cable

300 Ohm ribbon cable for connecting antennas to TV sets. Suitable for shorter runs.
Clear W 2071 **40¢/m**

TV Cable RG-59U Economy

Economical 75 ohm coax as used by many installers. Suitable for most average installations where there's a reasonable signal and runs are not too long.
White W 2080 **$1.15/m**

TV Cable RG-59U Economy

Economical 75 ohm coax as used by many installers. Suitable for most average installations where there's a reasonable signal and runs are not too long.
Black W 2081 **$1.15/m**

TV Cable RG-6

This multi-purpose coaxial cable is 75 ohm heavy-duty RG-6
W 2084 **$1.30/m**

75 Ohm Air Space

High quality, low loss coax that's ideal for low signal area installations. It provides much lower loss than standard RG-59 cables, especially at UHF frequencies.
W 2082 **$1.50/m**

Cat No.	Conductors	Shielding	Dielectric	Attenuation @100m 100MHz	200MHz	470MHz	700MHz
W 2080/W 2081	1 x 0.60mm		Solid P.E	7.0dB	13.0dB	16.2dB	23.0dB
W 2082	1 x 0.95mm	48 x 0.12mm	Air Cored P.E/Foil	6.9dB	10.2dB	15.5dB	19.3dB
W 2084	1 x 0.96mm	16/4 x 0.16mm	Solid P.E	6.9dB	12.5dB	14.4dB	16.4dB

Communications Cable

50 Ohm RG-178 Teflon

High quality mini (2.5mm OD) 50Ω coax ideal for internal wiring in transmitters, etc. Heat resistant Teflon insulation for ease of soldering, it handles up to 100 W @ 500MHz.
W 2088 (1m pk) **$4.95**

50 Ohm Belden 9913

Highest grade, lowest loss 50 ohm coax cable. Highly recommended for VHF/UHF installations.
Limited stock.
W 2097 **$7.95/m**

50 Ohm RG-58C/U

Commercial grade 50 (ohm symbol) coax. Mil Spec MIL-C-17D. Ideal for mobile installations due to its small 5mm OD size. It can also be used outdoors due to its UV resistant PVC outer sheath.
W 2092 **$1.35/m**

50 Ohm RG-213/U

A 10mm diameter, low loss 50 Ω cable for HF and VHF/UHF applications. MIL-C-17D. Ideal for longer runs or high power operation.
W 2099 **$3.25/m**

Fibre Optic Cable Pack

4m Supra grade cable for communications, industrial, or decorative uses. Provides <0.25dB/m attenuation at 650nm, and aperture acceptance angle of 55(degree symbol). Consists of a single 1.0mm diameter optical fibre inside a tough black jacket of 2.2mm OD. Data sheet supplied.
W 4061 **$16.50**

Cat No.	Conductors	Shielding	Coverage	Dielectric	Attenuation @100m 50MHz	100MHz	200MHz	400MHz	1000MHz
W 2088	7 x 0.1mm	Silver Coated Copper	96%	Teflon		0.46dB	0.62dB	0.92dB	
W 2092	19 x 0.18mm	Braided Tinned Copper	94.2%	P.E Type A		16dB	24dB	38dB	
W 2099	7 x 0.7mm	Braided Copper	97%	P.E	5.2dB	7.2dB		15.4dB	
W 2097	1 x 2.7mm	Duobond II Foil & Tinned Copper Braid	100%	P.E (Semi-solid)	3.0dB	4.6dB		8.5dB	14.8dB

Hook-Up Wire

Hook-Up Wire

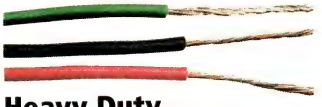
Flexible Light Duty

Red	W 2220	**Lt. Blue**	W 2228
Black	W 2221	**Grey**	W 2229
Brown	W 2222	**Cream**	W 2230
Orange	W 2223	**White**	W 2231
Yellow	W 2224	**Purple**	W 2227
Green	W 2225		
D/Blue	W 2226		

25¢/m

12 Colour Pack

Pack of 12 x 2m of different coloured strands of light duty wire the same as W 2220 to W 2231. All are 10 x 0.12mm cable. Cross sectional area: 0.11mm2. Ideal for projects and hobbyists, etc.
W 4010 **$4.95**



Heavy Duty

Red	W 2260
Black	W 2262
Green/Grey	W 2264

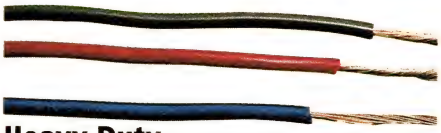
50¢/m

Medium Duty

Blue	W 2243
Yellow	W 2244
Red	W 2240
White	W 2241
Black	W 2242

40¢/m

SAVE 20% When you buy 100m or more of any cable on this page

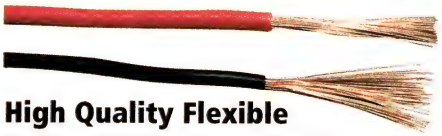


Heavy Duty
Brown W 2280
Blue W 2282
Red W 2284

55¢/m

Ultra Heavy Duty
Red W 2286
Black W 2288

$1.20/m



High Quality Flexible
Red W 2290 White W 2296
Blue W 2294
Black W 2292

$3.50/m

Cat No.	Conductors	Rating	Insulation	Cross Sectional Area
W 2220 – W 2231	10 x 0.12mm	1A	PVC	0.11mm²
W 2240 – W 2246	10 x 0.25mm	4.5A	PVC	0.49mm²
W 2260 – W 2264	24 x 0.2mm	7.5A	PVC	0.75mm²

Cat No.	Conductors	Rating	Insulation	Cross Sectional Area
W 2280 – W 2284	32 x 0.2mm	10A	PVC	1.0mm²
W 2286 – W 2288	41 x 0.32mm	30A	PVC	3.3mm²
W 2290 – W 2296	512 x 0.05mm	10A	PVC	1mm²

Speaker Cable

Light Duty
Suitable for short runs in intercoms and hi-fi applications. PVC insulation with colour-coded polarity indicator.
W 2010

45¢/m

Medium Duty
Lower resistance than W-2010, for use in longer runs. PVC insulation, with colour-coded polarity indicator.
W 2012

60¢/m

Heavy Duty
Heavy duty mains rated (240V AC @ 7.5A), insulated cable for use with medium to high power and long runs. With colour-coded polarity indicator.
W 2020

80¢/m

OFC Speaker Cables
Our OFC (oxygen-free copper) cable with PVC insulation has extremely high conductivity and very low power loss. It provides the best performance for demanding audiophile applications, and its attractive translucent insulation makes it unobtrusive in most installations.

OFC Speaker Cable
W 2013

$1.35/m

Dual Fig.8 OFC Cable
W 2023

$2.75/m

Low Loss OFC
W 2016

$3.20

Super Low Loss OFC
W 2017

$4.50/m

Harmony Gold

High Performance Flat OFC Speaker Cable
This new range of high performance flat braid OFC speaker cable is designed for audio and home theatre applications. It has a special low profile design that fits under most carpets.
W 2000 16-braid x 7 x 0.10mm **$1.95/m** W 2001 24-braid x 7 x 0.10mm **$2.95/m**

Cat No.	Conductors	Insulation	Cross Sectional Area	Nominal Capacitance
W 2010	14 x 0.14mm	PVC	0.22mm²	
W 2012	14 x 0.20mm	PVC	0.44mm²	
W 2020	24 x 0.20mm	PVC	0.75mm²	
W 2000	112 x 0.10mm	PVC	0.88mm²	40pF/m

Cat No.	Conductors	Insulation	Cross Sectional Area	Nominal Capacitance
W 2013 & W 2023	60 x 0.12mm	PVC	0.66mm²	50pF/m
W 2016	168 x 0.12mm	PVC	1.9mm²	60pF/m
W 2017	315 x 0.12mm	PVC	3.5mm²	60pF/m
W 2001	168 x 0.10mm	PVC	1.3mm²	40pF/m

Shielded Audio Cable

Single-Core Mini Shielded
W 2031

50¢/m

Single-Core Shielded
W 2030

55¢/m

Twin-Core Shielded
W 2034

90¢/m

Twin-Core Mini Shielded
W 2026

90¢/m

Twin-Shielded Fig. 8
W 2036

95¢/m

Microphone Cable
PA systems and professional sound installations.
W 2035

$2.20/m

Heavy Duty Ultra Flexible 2 Core
Quality Japanese Cable.
W 2037

$2.60/m

4-Core Shielded
W 2038

$1.60/m

4-Core Shielded Flat Cable
Ultra thin cable.
W 2039

$1.95/m

SAVE 20% When you buy 100m or more of any cable on this page

Wire and Cable

Specialised Super OFC Single
High quality, single-core shielded cable, Oxygen Free Copper (OFC) for maximum conductivity & shielding properties (90% coverage). **$2.15/m**
W 2032

Super OFC Fig. 8
Great for audio use eg. making up RCA to RCA patch leads. 90% shield coverage. **$4.35/m**
W 2033

Coiled Mic Cable
Extends fully up to 1 metre. 3 core, ideal for transceiver microphone leads. **$6.50/m**
W 1365

Cat No.	Conductors	Shielding	Nominal Diameter	Capacitance
W 2031	10 x 0.08mm Copper	Wrapped Copper	1.3mm OD	390pF/m
W 2030	7 x 0.12mm Copper	32 x 0.12mm	3.0mm OD	200pF/m
W 2034	7 x 0.12mm Copper	32 x 0.12mm	4.0mm OD	210pF/m
W 2026	16 x 0.1mm Copper	30 x 0.11mm	2.5 x 5mmOD	370pF/m
W 2036	7 x 0.12mm Copper	32 x 0.12mm	2 x 2.8mm OD	210pF/m
W 2035	20 x 0.12mm Copper	Braided Copper	6.0mm OD	90pF/m

Cat No.	Conductors	Shielding	Nominal Diameter	Capacitance
W 2037	10 x 0.12mm	48 x 0.1mm	5.0mm OD	225pF/m
W 2038	7 x 0.12mm Copper	32 x 0.12mm	5.0mm OD	190pF/m
W 2039	10 x 0.1mm Copper	Wrapped Copper	4 x 2.5mm OD	300pF/m
W 2032	14 x 0.18mm	112 x 0.12mm	6.0mm OD	85pF/m
W 2033	14 x 0.18mm	112 x 0.12mm	2 x 6mm OD	85pF/m
W 1365	30 x 0.08mm	Wrapped Copper	6.0mm OD	90pF/m

DC Power Cable

Figure-8 Medium Duty
DC cable suited to supplying power to smaller projects etc. **80¢/m**
W 2022

Figure-8 Heavy Duty
Ideal for running high current DC application. **$1.40/m**
W 2025

Auto Heavy Duty
Added protection in automotive applications. **$2.25/m**
W 2027

Auto Cable Rolls
Convenient 10m lengths available in two sizes.

16 x 0.3mm (10Amp)		26 x 0.3mm (15Amp)	
W 2350	Red	W 2360	Red
W 2352	Black	W 2362	Black
W 2354	Green	W 2364	Green
W 2356	Blue	W 2366	Blue
W 2358	Yellow	W 2368	Yellow
$7.95 ea		**$9.95 ea**	

Extra Heavy Duty
Ideal for high current DC applications such as high-power car audio installations, communications equipment, and solar power systems. High-quality O.F.C copper conductors with highly flexible PVC sheath. **$2.75/m**

Red	W 2302
Black	W 2304

Ultra Heavy Duty
For installations with huge DC current need. High quality OFC copper conductors and flexible PVC sheath allow easier installations in tight spaces. **$6.50/m**

Red	W 2306
Black	W 2308

Cat No.	Conductors	Rating	Cross Sectional Area
W 2022	50 x 0.12mm	50V/5A nom.	0.55mm²
W 2025	26 x 0.3mm	50V/17A max.	1.8mm²
W 2027	26 x 0.3mm	50V/19A max.	1.8mm²

Cat No.	Conductors	Rating	Cross Sectional Area
W 2350 - W 2358	16 x 0.3mm	10A	
W 2360 - W 2368	26 x 0.3mm	15A	
W 2302 - W 2304	630 x 0.12mm	50V/50A max.	7.1mm²
W 2306 - W 2308	1666 x 0.12mm	50V/120A max.	18.8mm²

Mains Cable

3-Core Light Duty
Suitable for projects, test equipment, etc. **$1.65/m**
W 2055

3-Core Ordinary Duty – 7.5A
Suitable for projects, etc. **$1.85/m**
W 2056

3-Core Ordinary Duty – 10A
The ideal cable for power tools, etc. **$2.10/m**
W 2058

3-Core Ordinary Duty – 15A
High rating for industrial power tools, caravan power cables, extension leads. etc. **$2.95/m**
W 2059

3-Core Cable – 7.5A
This 3-Core textile cable takes up to 240V. **$2.95/m**
W 2054

6-Core Flex
Ideal for older style rotators, or alarm system installations. **$3.45/m**
W 2042

1/1.13 Twin and Earth
$1.20/m
W 2060

1/1.78 Twin and Earth
$1.75/m
W 2062

Earth Wire
85c/m
W 3010

SAVE 20% When you buy 100m or more of any cable on this page

Cat No.	Conductors	Rating	Insulation	Cross Sectional Area
W 2055	24 x 0.2mm	240V AC 7.5A nom.	PVC Grey, 6.1mm OD	0.75mm²
W 2056	24 x 0.2mm	240V AC 7.5A nom.	PVC Grey, 7mm OD	0.75mm²
W 2058	32 x 0.2mm	240V AC 10A nom.	PVC Grey, 7.4mm OD	1.0mm²
W 2059	30 x 0.25mm	240V AC 15A nom.	PVC Orange, 8.6mm OD	1.5mm²
W 2054	42 x 0.15mm	240V AC 7.5A nom.	Textile B/W, 5.8mm OD	0.75mm²

Cat No.	Conductors	Rating	Insulation	Cross Sectional Area
W 2042	24 x 0.2mm	240V AC 7.5A nom.	PVC Grey, 9.5mm OD	1.0mm²
W 2060	1 x 1.13mm	240V AC 10A nom.	PVC White, 12mm (V75)	1.0mm²
W 2062	1 x 1.78mm	240V AC 25A nom.	PVC White, 13.5mm (V75)	2.5mm²
W 3010	7 x 0.67mm	240V AC 25A nom.	PVC Green/Yellow 3.3mm	2.5mm²

Computer/Data Cables

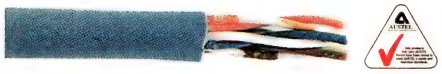
Fully insulated, shielded and sheathed multi-core data cables with tinned drain wire. Ideal for running data lines around buildings. All these data cables carry an Austel Certified Component Listing (CCL) number.

5-Core
W 2040
$1.75/m

8-Core
W 2046
$2.50/m

12-Core
W 2041
$2.95/m

25-Core
W 2043
$3.95/m



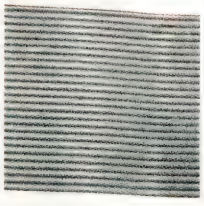
Category 5 Data Cable Multi-Strand
8 Conductor (4 pair) indoor communications cable with nominal 100W impedance, suitable for 'patching' applications in data networks.
W 2150
95¢/m

Category 5 Data Cable Solid Core
For fixed/building installations.
W 2151
95¢/m

Cat No.	Conductors	Insulation	Shielding or Nom. Cap.	Nominal OD	Austel No. (ACA)
W 2040	7 x 0.2mm	PVC	Foil with Drain Wire	5.5mm	A95/CA/0127
W 2046	7 x 0.2mm	PVC	Foil with Drain Wire	6.25mm	A95/CA/0096
W 2041	7 x 0.2mm	PVC	Foil with Drain Wire	7.0mm	A95/CA/0127

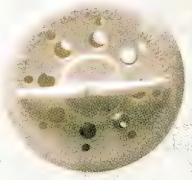
Cat No.	Conductors	Insulation	Shielding or Nom. Cap.	Nominal OD	Austel No. (ACA)
W 2043	7 x 0.2mm	PVC	Foil with Drain Wire	10.0mm	A95/CA/0127
W 2150	0 x 0.0mm	PVC	(15nF/305m [per pair])	6.0mm	A96/CC/0107
W 2051	1 x 0.5mm	PVC	(15nF/305m [per pair])	6.0mm	A95/CA/N692

Flat, multi-strand cable made specially for IDC applications. Comes boxed in 30 metre lengths for bulk buyers.



Type	Cat No.	Price/m
10-way	W 2740	$1.20
14-way	W 2742	$1.70
16-way	W 2744	$1.90
25-way	W 2748	$2.75
26-way	W 2750	$2.80
34-way	W 2752	$3.70
40-way	W 2754	$4.70
50-way	W 2756	$5.45

12-Core
Colour-coded strands of insulated conductors bonded together in a flat cable. Ideal for wiring looms, alarm systems, etc. Can be laid under carpets, split easily for separate wires or used as is. Made in Japan.
W 2045
$2.75/m



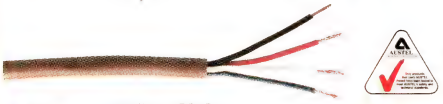
Inventco Tidy Cord
Get those 'too-long' cords out from under your feet with this state-of-the-art invention! Simply open the Cord Tidy, attach part of the cord to it, close it, wind it up and hey presto! A tidy cord is yours.
W 1100
$4.95

Intercom/Alarm/Telephone Cable

Bell Cable
W 2005
50¢/m

4-Core/Flat Telephone Cable
W 2121
75¢/m

4-Core – Telephone Style
W 2123
75¢/m



4-Core – Flexible
W 2101
90¢/m

6-Core – Telephone Style
W 2127
95¢/m

12-Core
W 2140
$1.85/m

Cat No.	Conductors	Insulation	Nominal OD	Austel No. (ACA)
W 2005	1 x 0.6mm	PVC	3.5mm	
W 2101	7 x 0.2mm	PVC	4.0mm	A93/CA/0130
W 2121	7 x 0.16mm	PVC	7.0mm	A92/CC/0008

Cat No.	Conductors	Insulation	Nominal OD	Austel No. (ACA)
W 2123	1 x 0.5mm	PVC	3.8mm	A95/CA/0087
W 2127	1 x 0.5mm	PVC	4.2mm	A93/CA/0097
W 2140	1 x 0.5mm	PVC	6.7mm	

SAVE 20% When you buy 100m or more of any cable on this page

Mains Leads

All mains leads below are 2 metres long with standard approved mains plug.

Cable With 3-Pin Plug

Mains lead with bare end. **$5.95**
W 2057

Mains Lead

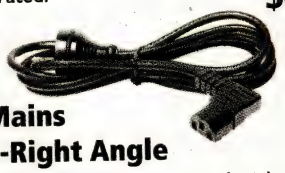
Mains lead with a figure-8 type socket. Used with audio and entertainment equipment. **$9.95**
W 1360

Mains Lead 7mm Spacing

Mains lead with a 7mm pin spacing socket on the other. Used on audio equipment. **$9.95**
W 1361

IEC Mains Lead

Mains lead with an IEC socket. Used with computers and communications equipment. 10amp rated. **$9.95**
W 1362



IEC Mains Lead-Right Angle

Similar to W 1362 above, but with right angle IEC plug. **$14.90**
W 1375

IEC Male/Female Extension Lead

Ideal for connecting printer or monitor to your computer. **$13.90**
W 1366

Appliance Cord

Used with modern kettles and other kitchen appliances, stretches to 1 metre. **$16.90**
W 1373

Colour may vary from store to store

Save 10% on 10 or more of the above

Quick Fix Cable Clamps

Designed to hold mains cable firmly in timber, masonry, etc. Packs of 20.

Size	Cable Type		Cat No.	Price
4mm	Round	White	W 4050	$2.75
5mm	Figure 8	White	W 4020	$2.75
6mm	Round	White	W 4051	$2.95
6mm	Round	Black	W 4052	$2.95
8mm	Round	White	W 4053	$3.25
13mm	Twin flat	White	W 4021	$2.95
15mm	Twin flat	White	W 4022	$3.25

Cable Staples

They simply straddle the cable and are hammered into place. In packs of 100. W 4025 **$4.75**

Cable Pin Clips

In packs of 50. **$5.95**
W 4059

Winding & Coated Wire

Tinned Copper Wire

High-quality tinned copper wire (22SWG) in handy 100g roll. Approx. 27-metre roll of 0.71mm tinned copper wire. **$7.95**
W 3015

Self-Fluxing Winding Wire

Ideal for coil winding, motor rewinding, transformer building, etc.

100g Rolls

Gauge B&S	Gauge SWG	Diam mm	Length Metres	Cat No.
16	18	1.25	9	W 3116
18	19	1.0	14	W 3118
20	21	0.8	21	W 3120
22	23	0.63	35	W 3122

$7.95 ea

25g Rolls

Gauge B&S	Gauge SWG	Diam mm	Length Metres	Cat No.
21	22	0.71	7	W 3123
24	25	0.50	13	W 3124
26	27	0.40	21	W 3126
30	33	0.25	55	W 3130
32	36	0.20	85	W 3132
36	40	0.125	216	W 3136

$5.75 ea

Resistance Wire

Comes in a 4 metre pack. Suitable for wire wound resistors, small heaters, elements, shunts etc.

Type	Resistance	Max°C	Cat No.	Price
Cuprothal	4.4 Ω/m	400	W 3200	$1.95
Nichrome 80	13.4Ω/m	1200	W 3205	$2.50

Wire Wrap Pack

Insulated Kynar wire wrap in convenient 15 metre rolls. 30AWG (0.25mm) silver-plated copper.

Black W 4002 Red W 4004
Green W 4006 Blue W 4008

$7.95 ea

Tubing & Heatshrink

Heat-Shrinkable Materials 2:1

High flexibility, radiation cross linked, flame retardant (except clear), tubing. Military grade polyolefin. Complies with U.S. Mil Spec. MIL-1-23053/5. Shrinks to 1/2 listed diameter with less than 5% longitudinal change. All lengths are 1.2m long.

Size	Black	Colours	Price
x 1.6mm	W 4100	W 4102	$2.75
x 3.2mm	W 4104	W 4106	$3.25
x 4.8mm	W 4108	W 4110	$3.75
x 6.4mm	W 4112	W 4114	$4.50
x 9.5mm	W 4116	W 4118	$4.95
x 12.7mm	W 4120	W 4122	$5.50
x 19.1mm	W 4124	W 4126	$7.50
x 25.4mm	W 4128	–	$9.50

Heat-Shrinkable Materials 3:1

Grade quality as above but shrinks to 1/3 listed diameter. Pack of 5 lengths by 200mm long.

Size	Cat No.	Price
1.5mm	W 4400	$3.75
3mm	W 4401	$4.25
7mm	W 4402	$5.50

Hobbyists Heat-Shrink Pack

Assorted pack of colours, sizes and lengths. Includes 3.2mm, 4.8mm, 6.4mm, 9.5mm, and 12.7mm diameter tubing. W 4060 **$5.95**

Heatshrink Tubing Kit

Assorted lengths of heatshrink tubing in a storage case. Includes 2.5mm, 3mm, 5mm, 7mm, 10mm, 13mm and 20mm diameter tubing. **$19.95**
W 4200

Silitube Pack

NEW FOR '99

Silicone rubber coated fibreglass braid. Expands to 1.6 x original diameter. Pack contains six 200mm lengths: three red (2mm, 3mm, 6mm) and three black (2mm, 3mm, 6mm). **$4.95**
W 4062

Spaghetti Pack

Contains 30 lengths of assorted colours and diameters of spaghetti tubing. **$4.95**
W 4040

Fuse Wire

Four sizes of mains fuse wire (8, 16, 20, 30A). **$2.95**
W 3180

Save 20% when you buy 10 or more of any of the above

•DATA • DATA • DATA •

Hobbyists, tradesmen, students and technicians find the Dick Smith Electronics Catalogue a very useful source of information. If you're new to our Catalogue you can expect up-to-date data and handy hints that you won't come by anywhere else. Used by schools and colleges throughout the country, our famous "Data Section" has been fully revised to keep you up to speed with the very latest information. All material has been designed and compiled by our Engineering Department. No other catalogue in the country gives you so much. So when you need accurate, useful and comprehensive information on hand, reach for your Dick Smith Electronics Catalogue. In addition to this comprehensive information, Data Sheet Packs containing data on integrated circuits are available (B 5800/02) from your local store.

PLEASE NOTE

Not all devices shown in this section are stocked by Dick Smith Electronics. While every effort is made to ensure that this data is correct and as up-to-date as possible, no responsibility will be accepted for its use or consequences arising from its use. If in doubt, please consult the manufacturer's data sheets.

BATTERY REPLACEMENT GUIDE

Type	No.s	Voltage	Size	Type	Replaces	Other Types	No.s				
HEAVY DUTY											
1015	S 3099	1.5	AA	Carbon Zinc	R6C	UM3-DE	15	M15R	UM3	R6TR	HR6
1035	S 3107	1.5	C	Carbon Zinc	R14C	UM2-DE	14	M14R	UM2	R14TR	HR14
1050	S 3109	1.5	D	Carbon Zinc	R20C	UM1-DE	13	M13R	UM1	R20TR	HR20
216	S 3106	9	Radio	Carbon Zinc	6F22	006P-DE	PP3	2022	6F22TR	H6F22	M1604
SUPER HEAVY DUTY											
1215	S 3110	1.5	AA	Carbon Zinc	R6P	UM3-NE	15D	M15HD	SUM3	R6HD	ER6
1235	S 3112	1.5	C	Carbon Zinc	R14P	UM2-NE	14D	M14HD	SUM2	R14HD	ER14
1250	S 3114	1.5	D	Carbon Zinc	R20P	UM1-NE	13D	M13HD	SUM1	R20HD	ER20
ALKALINE											
E90	S 3288	1.5	N	Alkaline	LR1	AM5	MN9100		4001	L20	910A
E91	S 3281 S 7804	1.5	AA	Alkaline	LR6	AM3	MN1500	15A	4006	L40	
E92	S 3278 S 7802	1.5	AAA	Alkaline	LR3	AM4	MN2400	24A	4003	L30	
E93	S 3282	1.5	C	Alkaline	LR14	AM2	MN1400	14A			
E95	S 3284	1.5	D	Alkaline	LR20	AM1	MN1300	13A	4020	L90	
E96	S 3275	1.5	AAAA	Alkaline							
522	S 3286	9	Radio	Alkaline	6LR61	6AM6	MN1604	1604	4022	6L10	6LF22
GP27A	S 3434	12	ø8 x 28.2mm	Alkaline							
GP23A	S 3435	12		Alkaline	A23						
GP11A	S 3436	6	ø10 x 16mm	Alkaline							
LANTERN BATTERIES											
509	S 3240	6	'Dolphin'	Carbon Zinc	4R25S	4F	908	M908	431	4R25	996
731	S 3244	6	'Big Jim'	Carbon Zinc	4R25S-2	4F2	918	M918	4R25-2991		
1231	S 3248	6	'Big Jim'	Carbon Zinc	4R25P-2	4F2	918D	H4R25-2	731		
PHOTOGRAPHIC/SPECIAL PURPOSE											
A23	S 3335	12		Alkaline							
2L76	S 3060	3		Lithium	DL1/3N	CR1/3N					
S76	S 3080	1.5		Silver Oxide	GM13	G13	RS76	MS76	EPX76		
N	S 3288	1.5		Alkaline	LR1	AM5	MN9100	910A	4001	L20	
J539	S 3072	6		Alkaline	7K67	867	4018				
A544	S 3289	6		Alkaline	4LR44	7250	PX28	537	7H34	544	
EL2CR5	S 3068	6		Lithium							
EL223AP	S 3067	6		Lithium	DL223A	BR-P2					
U9VL	S 3165	9	Radio	Lithium							
CALCULATOR/GAMES											
A76	S 3061	1.5	High Drain	Alkaline	LR44 VG13A S76	357 RW82	G13 4276	AG13 4176	5244 EPX76		
186	S 3062	1.5	High Drain	Alkaline	LR43 VG12GA 548	386 RW84	G12 4278	AG12 10L124	8007 SR43W	GP86	86A548 D386
189	S 3063	1.5	High Drain	Alkaline	LR54 V10GA 289	389 RW89	G10 4274	SRW1130 10L122	8019 LR1130	GP89	A120 89A
EL123AP	S 3334	3		Lithium	CR123A	BR123A	DL123A				
ECR1220	S 3337	3	Low Drain	Lithium	CR1220	BR1220	DL1220				
ECR1616	S 3333	3		Lithium	CR1616	BR1616	DL1616				
ECR2016	S 3332	3		Lithium	CR2016	BR2016	DL2016				
ECR2025	S 3330	3		Lithium	CR2025	BR2025	DL2025				
ECR2032	S 3331	3		Lithium	CR2032	BR2032	DL2032				
WATCH/HEARING AID											
AC13E	S 3039	1.4		Zinc Air	DA13	L13Z	AC13	13HPX	R13ZA	13A	
S13E	S 3041	1.5		Silver Oxide	MS13H	RS13G					
AC312E	S 3040	1.4		Zinc Air	DA312	L312ZA	AC312	312HPX	R312ZA	312A	
AC675E	S 3038	1.4		Zinc Air	DA675	L6752A	AC675	675HPX	R6752A		
357	S 3293	1.5	High Drain	Silver Oxide	G13	J	SR44W	541	D357	SR44	7
362	S 3050	1.5	Low Drain	Silver Oxide	G11	SR721SW	532	TR721SW	19		
364	S 3051	1.5	Low Drain	Silver Oxide	G1	SR621SW	531	TR621SW	31		
371	S 3056	1.5	Low Drain	Silver Oxide	SR69	SB-AN	V371	SR920SW	30		
377	S 3055	1.5	Low Drain	Silver Oxide	BA	SR626SW	D2V	37	39	V377	
379	S 3298	1.5	Low Drain	Silver Oxide	SR521SW	JA	V379	50			
381	S 3291	1.5	Low Drain	Silver Oxide	SR1120SW	SB-DS	34	V381			
384	S 3052	1.5	Low Drain	Silver Oxide	SR41SW	527	D384	TR41SW	10		
386	S 3295	1.5	High Drain	Silver Oxide	G12	H	SR43W	548	D386	SR43	186
389	S 3292	1.5	High Drain	Silver Oxide	G10	SR1130W	554	D389	SR54	189	17
390	S 3294	1.5	Low Drain	Silver Oxide	SR1130SW	SB-AU	11	V390			
391	S 3296	1.5	High Drain	Silver Oxide	G8	SR1120W	553	D391	SR55	TR1120W	191
392	S 3299	1.5	High Drain	Silver Oxide	G3	K	SR41W	547	D392	SR41	TR41W
396	S 3049	1.5	High Drain	Silver Oxide	G2	SR726W	556	SR59	29		
397	S 3054	1.5	Low Drain	Silver Oxide	G2	SR726SW	536	TR726SW	26		
VIDEO CAMERA											
V208	S 3442	6	1800mAH	NiMH	Sony, Sanyo, Panasonic, JVC, Mitsubishi, Akai, Sharp and other 6V camcorders						
V213	S 3443	6	3600mAH	NiMH	Sony, Sanyo, Panasonic, JVC, Mitsubishi, Akai, Sharp and other 6V camcorders						

COMPONENTS

Correctly identifying electronic parts can be one of the most difficult tasks facing someone building or repairing electronic equipment. As components become even smaller to allow higher density circuit boards, it is increasingly difficult to distinguish the different types such as resistors, capacitors, inductors and subminiature fuses.

Knowing what markings to expect can be a big help when faced with a circuit board full of unfamiliar components. The information presented here, combined with a basic understanding of components should enable you to correctly identify those most commonly used.

PREFERRED VALUES

The system of preferred values, which is used for resistors, capacitors and inductors, was developed to provide a logical progression from one value to the next, where each value represents an increase by an approximately constant percentage. Depending on the tolerance of the particular components, there can be between 3 and 192 preferred values in each decade. The more common series are shown in the tables below. Values given for each series are repeated in every decade.

3 PER DECADE (50% TOLERANCE)

10 22 47

12 PER DECADE (10% TOLERANCE)

10 12 15 18 22 27 33 39
47 56 68 82

24 PER DECADE (5% TOLERANCE)

10 11 12 13 15 16 18 20
22 24 27 30 33 36 39 43
47 51 56 62 68 75 82 91

DECIMAL MULTIPLIERS

Decimal multiplier prefixes are in common use to simplify and shorten the notations of quantities such as component values.

Capacitance, for example, is measured in Farads. But the Farad is far too large a unit to be of practical use in most cases. For convenience, we use sub-multiples to save a lot of figures. For example, instead of writing 0.000000000001 Farads, we write 1pF (1 picofarad).

The more common prefixes and the relationships to one another are as follows.

ABBREV.	PREFIX	MULTIPLY BY	OR
p	pico	0.000000000001	10^{-12}
n	nano	0.000000001	10^{-9}
u	micro	0.000001	10^{-6}
m	milli	0.001	10^{-3}
–	UNIT	1	10^{0}
k	kilo	1000	10^{3}
M	mega	1000000	10^{6}

UNITS

1000 pico units	=	1 nano unit
1000 nano units	=	1 micro unit
1000 micro units	=	1 milli unit
1000 milli units	=	1 unit
1000 units	=	1 kilo unit
1000 kilo units	=	1 mega unit

CIRCUIT NOTATION

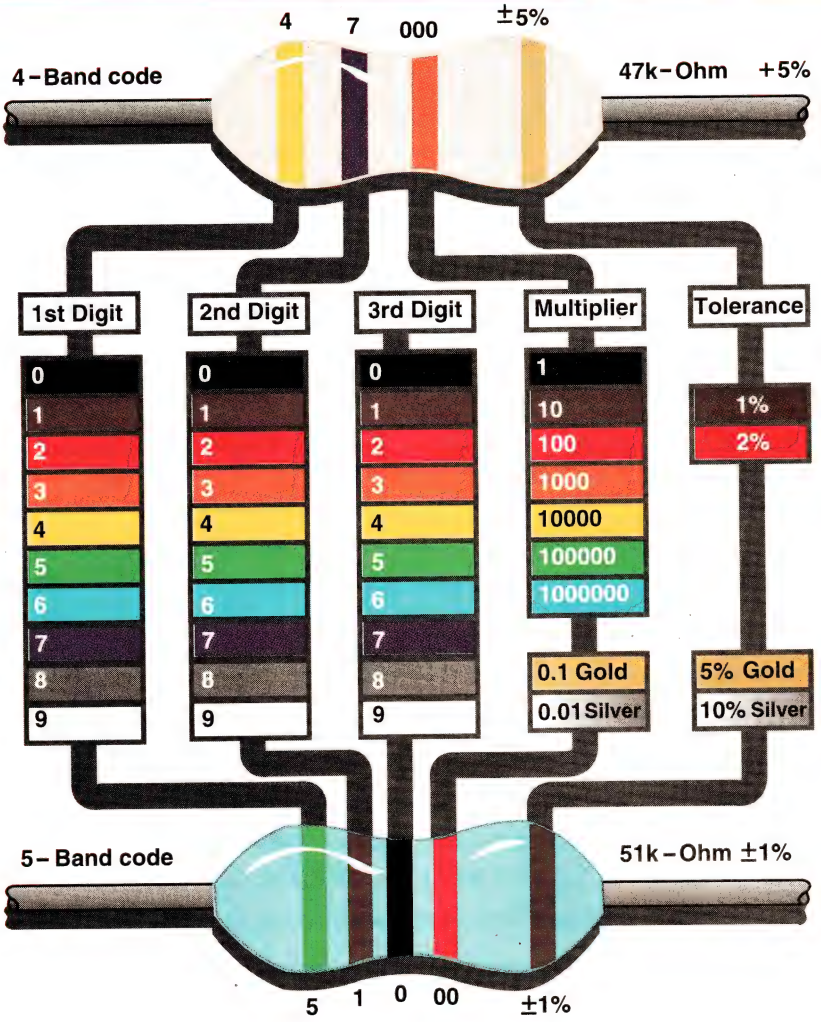
Some circuits give component values as they are normally spoken – e.g. 4.7pF for 4.7 picofarads, 5.6nH for 5.6 nanohenries. Others replace the decimal point with the first letter of the sub-multiple e.g. 5n6 for a 5.6nF capacitor or a 5.6nH inductor. Similarly for resistors, 6k8 is the same as 6.8k ohms while 1R5 would mean 1.5 ohms.

TOLERANCE

All components differ from their marked value by some amount. Tolerance specifies the maximum allowed deviation from the specified value. Tolerances are normally expressed as a percentage of the nominal value.

As an example, a component with a marked value of 100 and a tolerance of 5%, could actually be any value between 5% below the marked value (95), and 5% above the marked value (105).

RESISTOR COLOUR CODE



Full size copies of this chart are available from all stores (B 1000)

RESISTORS

Most resistors are so small that it is impractical to print their values on them using normal numeric characters. Instead, they are marked using a code of coloured bands.

Resistors made to tolerance of 5% and 10% are marked with 4 bands while higher precision types, such as 2%, 1% or better, may be marked with 5 bands to allow for an extra digit of precision.

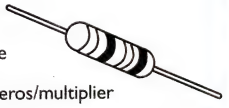
How to read 4-band codes:

At one end of the resistor there will be a gold, silver or brown tolerance band. This band is usually spaced apart from the other three bands. Start with the band nearest to the other end. Its colour represents the first digit of the resistor's value, as shown in the colour code chart. The next band represents the second digit of the resistor's value. The third band represents the decimal multiplier, that is, the number of zeros that we have to put after the first two digits to arrive at the resistor's value. The final band gives us the tolerance of the resistor, silver for 10% types, gold for 5% types, brown for 1% types.

Let's take the resistor shown at the top of the colour chart as an example. It's first band is yellow, representing "4" and the second band is violet, representing "7". The third band, the multiplier, is orange which tells us to add 3 zeros to the number we already have. This is the same as multiplying it by 1,000. Thus the value of the resistor is 47,000 – forty-seven thousand ohms or 47k-ohms. Finally, the fourth band, being gold, indicates that the resistor has a 5% tolerance, that is, its actual value will be somewhere between 44,650 ohms and 49,350 ohms.

Some special high-voltage resistors use a yellow tolerance band in lieu of gold. This is simply because the metal particles in the gold paint might compromise the resistor's voltage rating.

What they mean:



Band one – first figure of value
Band two – second figure of value
Band three – number of zeros/multiplier
Band four – tolerance

Tolerance band colours: brown 1%, red 2%, gold 5%, silver 10%, none 20%.

Reading 5-band resistors:

Because the final band on these resistors is usually brown or red, it can be a bit more difficult to know which end to start from. In most cases the first four bands are grouped a bit closer together than the fourth and fifth bands. The first two bands are read the same as they are on the 4- band types. The third band supplies the third digit of the value. The fourth band now becomes the multiplier and the fifth represents the tolerance.

For example, if the 5 bands are, from first to fifth, red/yellow/white/gold/brown, then the three significant digits of the value would be "249", the multiplier would be 0.1, and the tolerance 1%. Hence, this is the code for a 24.9 ohm, 1% resistor.

What they mean:

Band one – first figure of value
Band two – second figure of value
Band three – third figure of value
Band four – number of zeros/multiplier
Band five – tolerance

CAPACITORS

Capacitors may be marked to show their value, voltage rating, accuracy, temperature stability and other information. Most capacitors are not marked with all of these, however, the value and voltage rating are usually given. Identification can be difficult because of the variety of systems in use.

UNITS

The unit of capacitance is the Farad, but this unit is too large in practice. Commonly used smaller units are the microfarad (abbreviated uF), nanofarad (nF) and picofarad (pF). The section on decimal multipliers shows the relationship between these.

Some capacitance values are commonly expressed by only one unit while others can be expressed under two or more units, e.g. 1uF would rarely be called 1000nF and never 1,000,000 pF, even though these are equivalent. However, 0.0047uF is often expressed as 4.7nF, or as 4700pF.

VALUE

Larger capacitors are marked in microfarads and indicate this by the abbreviations 'uF', 'u' or even the obsolete 'MFD'. Smaller capacitors are marked in nanofarads or picofarads and may abbreviate the unit to 'n' or 'p'.

If the value contains a decimal point the 'u','n' or 'p' is sometimes put in place of the decimal point. Therefore a 4.7pF capacitor can be marked as 4p7.

If no unit is given, a judgement, based on the capacitor's physical size, must be made to determine which unit is intended. For example, a small ceramic capacitor marked '4.7' is probably 4.7 pF, whereas a large plastic capacitor marked '4.7' is more likely to be 4.7uF. If the value is in nF then this is invariably shown.

Another marking system uses 3 numeric digits to indicate the value in picofarads. The first two digits represent the first two digits of the value and the third digit is the multiplier or number of zeroes.

For example, a capacitor marked 104 would be read as 1, 0, 0000. This would be formatted as 100,000 pF and would commonly be known as 100nF or 0.1uF. Likewise a capacitor marked 472 would be 4700pF, also known as 4.7nF or .0047uF.

A similar system represents these 3 digits using colours taken from the resistor code, instead of numbers.

Some common values and their possible markings:

MICROFARADS	NANOFARADS	PICOFARADS	EIA CODE
0.0001uF*	0.1n*	100pF	101
0.00022uF*	0.22n (n22)	220pF	221
0.001uF	1n (1n0)	1,000pF	102
0.0033uF	3.3n (3n3)	3,300pF	332
0.01uF	10n	10,000pF*	103
0.047uF	47n	47,000pF*	473
0.1uF (u1)	100n	100,000pF*	104
0.82uF (u82)	820n	820,000pF*	824
1.0uF (1u0)	1000n*	1,000,000pF	105

** Not normally expressed in this form.*

VOLTAGE RATING

Voltage rating is usually marked and is often identified by the symbol 'V'. Most electrolytic capacitors clearly indicate their voltage rating. Polyester capacitors usually show the voltage rating but often omit the 'V' symbol. Small ceramic capacitors often show no voltage rating.

If the capacitance and voltage rating are both marked, a unit is also marked for at least one of the quantities so that the two cannot be confused.

TOLERANCE

Tolerance indicates how close a capacitor's actual value is likely to be to its marked value.

A tolerance can be marked numerically, as a code consisting of a single letter, or, on colour-coded capacitors, as a 4th coloured band. The code letter is usually placed immediately after the value. Commonly used tolerance codes are:

CODE	COLOUR	TOL	CODE	COLOUR	TOL
A	–	+20-10 (2)	L	–	+/-15%
C	red	+/-0.25pF (1)	M	black	+/-20%
D	green	+/-0.5pF (1)	N	–	+/-30%
E	white	+/-1.0pF (1)	P		+100 -0
F	brown	+/-1%	Q (2)	–	+30 -10
G	red	+/-2%	S	–	+50 -20
J	green	+/5%	W	–	+50 -10
K	white	+/-10%	W (2)	–	+40 -20
			Z	grey	+80 -20

(1) used on capacitors <=10pF
(2) used on electrolytic capacitors

POLARITY

Polarity sensitive capacitors, such as electrolytics, are usually marked with a '+' or '-' symbol adjacent to one lead to indicate polarity. Thomson brand tantalum capacitors may have a triangular logo to indicate the positive lead, instead of the '+' symbol.

TEMPERATURE CHARACTERISTICS

All real capacitors exhibit some change in value with varying temperature. Some ceramic types exhibit fairly linear changes and are useful as temperature compensating elements in AC circuits.

The temperature coefficients of these types may be marked in letter codes or designated by a coloured spot.

TEMPCO CODE	EIA CODE	IIS CODE	COLOUR CODE	TEMPCO PPM/°C
P100			red/violet	+100
NP0	COG	C	black	0
N30	S1G	H		-30
N033	S1G		brown	-33
N075	U1G		red	-75
N080	U1G	L	red	-80
N150	P2G	P	orange	-150
N220	R2G	R	yellow	-220
N330	S2H	S	green	-330
N470	T2H	T	blue	-470
N750	U2J	U	violet	-750
N1500	P3K	W	orange/orange	-1500
N2200	R3L			-2200
P350/N1000	SL	SL		+350 to -1000

Capacitors using the JIS code sometimes have a second letter to designate the temperature coefficient's tolerance.

Letter	Tempco Tolerance
G	+/-30ppm/°C
H	+/-60ppm/°C
J	+/-120ppm/°C
K	+/-250ppm/°C
L	+/-500ppm/°C

For example, a capacitor marked "CH" would have a temperature coefficient of between +60ppm/°C and -60ppm/°C ("C"=0, "H"= +/-60ppm/°C).

Ceramic capacitors with non-linear temperature coefficients sometimes use a 3-digit code to indicate – their operating temperature range and their stability over that range.

The 1st character indicates minimum operating temperature, the 2nd, maximum temperature and the 3rd gives the stability over this temperature range.

1ST CHARACTER	MIN TEMP °C	2ND CHARACTER	MAX TEMP °C
X	-55	5	+85
Y	-30	7	+125
Z	+10		

3RD CHARACTER	STABILITY (%)
F	+/-7.5
P	+/-10
R	+/-15
S	+/-22
T	+22/-33
U	+22/-56
V	+22/-82

An example of this is the common 'Z5U' type used in bypass applications. This capacitor operates over the +10° to +85° temperature range and exhibits a stability of +22 to -56% over this temperature range.

PUTTING IT ALL TOGETHER

Knowing how the important information is likely to be marked, we can decode the markings on a capacitor and determine its value, voltage rating, tolerance and sometimes its temperature characteristic.

For example, a capacitor marked 104K 63V Y5P will be 0.1uF (decoded from the 104) having a +/-10% tolerance (decoded from the K), a 63 volt rating, an operating temperature range of -30° to + 85° (decoded from Y5) and a stability of +/-10% (P) over this range. Likewise, 6n8K63 would indicate 6.8nF (from 6n8), +/-10%, (from K) and 63 volts (from 63).

104 = 1 0 0000 pF
= 100nF = 0.1 uF
K = ± 10% Tolerance
63 = 63 Volts
Y = -30°C
5 = +85°C
P = ±10% Stability

FILM CAPACITOR TYPES

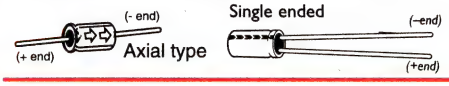
KP	Polypropylene film/foil
KS	Polystyrene film/foil
KT	Polyester film/foil (polyethylene terephthalate PETP)
MK	Metallized plastic film (general)
MKC	Metallized polycarbonate
MKP	Metallized polypropylene
MKT	Metallized polyester (polyethylene terephthalate, PETP)
MKT-P	Metallized polyester/paper
MKY	Metallized low-loss polypropylene
MKL (MKU)	Metallized lacquer (cellulose acetate)

CAPACITORS & THEIR USES

ALUMINIUM ELECTROLYTIC CAPACITORS

Ideal for use in filtering or smoothing applications in power supplies. Also used for coupling and bypassing in audio circuits and as a timing element in non critical circuits.

Modern aluminium electrolytic capacitors have high reliability and low leakage. Special low leakage versions are available with leakage which rivals that of tantalum capacitors.



SOLID TANTALUM CAPACITORS

Offer smaller size and lower leakage than standard aluminium electrolytics.

CERAMIC CAPACITORS

Offer low cost and high capacitance in a small physical volume. There are generally two types:

High stability, temperature compensating types for use in resonant circuit and filter applications. These have linear temperature characteristics, and their value is largely independent of voltage and frequency.

Bypass and coupling capacitors for use in less critical applications. These are less stable, have non-linear temperature characteristics and are somewhat voltage dependent.

PAPER CAPACITORS

An original construction, now rarely used. Plastic film capacitors have replaced paper capacitors in most applications.

POLYESTER CAPACITORS

Low cost, good stability and available in a large range of values. These are the most widely used capacitors for general purpose applications.

Greencaps and MKT type capacitors are examples of polyester (polyethylene terephthalate) film capacitors.

POLYCARBONATE CAPACITORS

Offer low temperature coefficient and lower dielectric losses at high frequency. Most often chosen for temperature stability characteristics.

POLYSTYRENE CAPACITORS

Usually chosen for applications requiring tight tolerance coupled with high stability. Predictable temperature coefficient used in conjunction with particular ferrite cores makes highly stable tuned circuits or oscillators.

POLYPROPYLENE CAPACITORS

Offer very low dielectric losses and good temperature coefficient. Used in power electronics applications, e.g. mains capacitors, switching power supplies, inverters and TV deflection circuits.

INDUCTORS

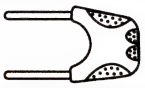
There are a variety of marking systems for small inductors. The value may be marked directly, with a three digit numeric code or a colour code. The tolerance may be marked directly, with a single letter, or a colour code.

The 3-digit numeric code indicates the value in microhenries. The first two digits represent the first two digits of the value and the third is the multiplier, or number of zeroes. For example, the code 472 would be interpreted as 4 7 00 uH, or 4.7mH. Likewise, 103 would represent 10mH.

Where coloured bands are used, the system is essentially the same as that used for the resistor colour code, but with the value expressed in microhenries. An exception is that some inductors include an extra, thicker band at one end to identify milspec characteristics.

Tolerance codes are usually placed after the value code. M is used to represent +/-20%, K or a silver band for +/-10%, J or a gold band for +/- 5%.

Resin-dipped radial lead types are often marked with a sequence of coloured dots. The significance of these dots is shown below.



4th Dot (Tolerance)
1st Dot
2nd Dot
3rd Dot (Multiplier)

MOS HANDLING PRECAUTIONS

Modern MOS manufacturing technologies have brought new levels of circuit sophistication and convenience to the circuit Designer. However, the extremely fine geometries and very high impedances found in these devices results in them being considerably more fragile than earlier devices.

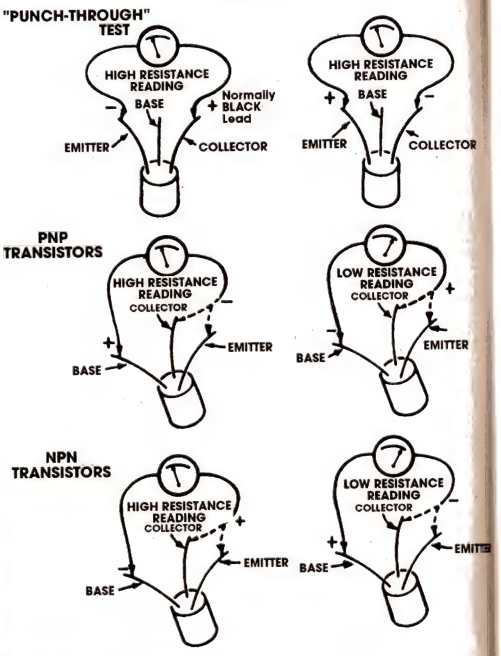
A CMOS IC input is electrically equivalent to a capacitor, of 1 to 5 pF, in parallel with a resistor of around 1 million megohms. Such a huge input impedance is prone to the build up of high electrostatic voltages, which may damage the IC through a variety of failure mechanisms.

Although most MOS devices incorporate protection networks at their inputs, at best these are only effective against static voltages of no more than about 4kV. Even the simple act of walking across a polished floor can cause a static build up on a human body of 4kV-15kV. Consequently, the following handling precautions should be adhered to at all times when handling MOS devices and circuitry.

- Never exceed the published maximum ratings specified for any device, especially a MOS part. Special care may be needed to ensure that switch-on and power down transients are contained within specified limits.
- Tie all unused MOS inputs to low-impedance, valid logic level such as Vss or Vdd.
- Only connect and disconnect test equipment to MOS circuitry while that circuitry is powered up.
- Never remove or insert a socketed MOS IC while power is applied to it.
- When MOS inputs are connected to long, noisy lines, or to circuitry operating from a different power source, series resistors (10K to 100K) should be added to protect the MOS device. In some cases this may be impractical as the added resistance may slow input rise and fall time to an unacceptable degree.
- MOS devices and circuitry should only be stored and transported in antistatic packaging.
- Nylon and similar materials, which allow the generation and build up of static charges, should never be allowed to contact MOS devices.
- MOS devices should be placed on a grounded surface and users should ground themselves to discharge any accumulated static prior to handling the devices. The use of current-limited, grounded wrist-straps is advisable.
- Similarly, soldering irons and other tools should be discharged to ground prior to using them on MOS circuitry.
- MOS devices should be mounted on PCBs after all other components have been loaded and soldered.
- Ground and supply pins of MOS ICs should be soldered before other pins.
- Air humidifiers should be employed in otherwise dry environments. Relative humidities above 40% can significantly reduce the build up of static charges.

CHECKING TRANSISTORS

The diagrams show a simple method for checking transistors using a common analog multimeter switched to a low ohms range. Note that with most analog meters, the red lead is negative and the black is positive when used on resistance ranges. Most digital multimeters can not be used in this way unless they have special ranges for testing semiconductor junctions.



RMS, AVERAGE AND PEAK RELATIONSHIPS

The term "RMS" (root-mean-square) is often encountered in electronics publications. It is the value of a voltage or current waveform which results in the same power being dissipated in a resistive load. For example, a 240V RMS a.c. waveform, no matter what its shape, will cause the same power dissipation in a resistor as 240V d.c.

The table below shows the relationship between the RMS and average values for three common waveforms for which the peak value is known. Multiplying the peak value by the factors given in the table will yield the RMS and average values.

Strictly speaking, the average value of a waveform, which is symmetrical about the zero axis, is zero. However, we often need to know the average of the absolute value of a waveform, and this is the value which the table factors will yield.

Most test equipment does not directly measure RMS values. Meters typically measure average values but are scaled to provide the RMS value of a sine wave. Knowing this, we can convert the indicated reading back to the average value and then convert this to the true RMS value as long as we know the shape of the measured waveform.

WAVESHAPE	MULTIPLYING FACTOR TO CONVERT PEAK VALUE TO: RMS	AVERAGE
Sine	0.707	0.637
Square	1	1
Triangle/ Sawtooth	0.577	0.5

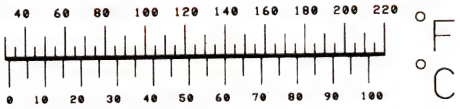
CONVERSIONS

Angstroms/Nanometer	10
millimetres/inch	25.4
centimetres/foot	30.48
metres/yards	0.914
kilometres/mile	1.609
grams/ounce	28.35
kilograms/pound	0.454
litres/pint	0.567
litres/gallon	4.54
litres/cubic foot	28.32
Joules/Electron Volt	1.60210×10^{-19}
Watts/Horsepower	746
Coulombs/Amps Hour	3600

TEMPERATURE CONVERSION

°C = 5/9 (°F-32)

°F = 32 + 9/5 °C



HANDY CONSTANTS

Natural logarithm base	e	2.71828
ln (x)/log (x)		2.3026
Pi		3.14159265
Pi (for Basic Programmers)		4 x ATN (1)
0dBm		1mW
0dBm voltage in 600 ohms		774.6mV
0dBm voltage in 50 ohms		223.6mV
dBSPL reference level		20uPa
Charge on electron	e	1.60210×10^{-19}C
Absolute zero	0K	-273.16°C
Speed of light in Vacuum	c	2.997925×10^{8}ms^{-1}
Speed of Sound	c	
- In air @ 0°C		331.6ms^{-1}
- In air @ 20°C		343ms^{-1}
- In fresh water @ 20°C		1481ms^{-1}
- In sea water @ 13°C		1500ms^{-1}
Density of air @ 20°C	p0	1.293kgm^{-3}

JAPANESE SEMICONDUCTORS

Japanese Semiconductor part numbers that conform to JIS nomenclature provide useful information about the type of device.

The first character is a numeral which is one less than the effective number of electrodes. Therefore, diodes will begin with '1', transistors with '2'.

The second character is always 'S' to indicate the product is a semiconductor. The third character indicates the type of semiconductor:

A .....High Frequency PNP Transistor
B .....Low Frequency PNP Transistor
C .....High Frequency NPN Transistor
D .....Low Frequency NPN Transistor
J .....P Channel FET
K .....N Channel FET
S .....Small Signal Diodes

Using this information, we can work out that a 2SC 1969 must be a HF NPN transistor, and 2SK 134 will be an N channel FET.

FUSES

The humble fuse provides reliable and low cost protection against excessive currents which occur during overloads. There are many different types and styles of fuses, and selecting the right fuse for a particular application can be difficult.

When replacing blown fuses, try to obtain a fuse with a rating as close as possible to the original. If it is not possible to locate an exact replacement, remember this – A higher current fuse will offer less protection to the equipment, increasing the risk of damage and fire. A lower current fuse will offer more protection, but will be more prone to nuisance blowing. Therefore, it is better to substitute a lower value fuse until the correct type is obtained.

The explanations below should assist in understanding the terminology of fuses.

Current Rating indicates the current carrying capacity of a fuse under a particular set of test conditions, at 25°C. Fuses operated at higher temperatures need to be derated, and allowance must be made for any surge that occurs during switch-on. It is generally recommended that fuses be specified at 125% of normal load current in order to avoid nuisance blowing.

Voltage Rating is the maximum circuit voltage at which a fuse can be relied upon to safely interrupt an overcurrent. At voltages higher than the rating, a fuse may not be able to suppress the internal arcing that occurs after the fuse link melts. In electronic circuits, where limiting impedances ensure that the fault current is kept low so that a destructive arc cannot occur, fuses may sometimes be used beyond their specified voltage rating.

Fuse Types. The common 3AG (Size 3 Automotive Glass) fuses are 6.3mm (0.25") in diameter and 32mm (1.25") in length. The smaller M205 fuse is 5mm in diameter and 20mm in length.

Standard fast-acting fuses are designed to open very quickly during an overload. They are not designed to withstand the inrush current or switch-on surge that occurs in some equipment.

Time delay or slow-blow fuses are designed to tolerate the temporary overloads that occur during switch on, but they still blow quickly if subjected to gross overloads during faults. Slow blow fuses are commonly used in the primary circuits of electronic equipment, where the initial surge can be many times the normal load current. Slow blow fuses and fast acting fuses are not interchangeable due to their different time characteristics.

It should be understood that the overload needed to cause even a fast-acting fuse to open quickly must be of the order of 200% or more. An overload of only 35% (ie 4A through a 3A fuse) could take an hour to open a fuse.

ELECTRONIC FORMULA

CAPACITORS & INDUCTORS REACTANCE & RESONANCE

Like resistors, capacitors and inductors can be used to impede the flow of current in a circuit. However, unlike resistors, the impedance of these components varies with frequency. The impedance of an inductor increases with increasing frequency whereas the impedance of a capacitor increases with decreasing frequency. While the impedance of a resistor is termed resistance, the impedance of capacitors and inductors is termed reactance. The reactance of a capacitor can be calculated from the formula:

$$X_C = \frac{1}{2\pi f C}$$

For an inductor the formula becomes : $X_L = 2\pi f L$ where X_C is the capacitive reactance in ohms, X_L the inductive reactance in ohms, C is the capacitance in farads, L is the inductance in henries and f is the applied frequency in Hz.

Because reactive impedances are imaginary and resistive impedances are real, they cannot be added numerically. The total impedance of a resistor in series with a reactive component is given by:

$$Z = \sqrt{X^2 + R^2}$$

where Z is the complex impedance in ohms, X is the capacitive or inductive reactance and R is the resistance of the resistor in ohms.

When an inductor and a capacitor are placed in parallel, at a particular frequency, termed the resonant frequency, the magnitude of their reactances will be equal and the parallel network will have a very high impedance which decreases either side of the resonant frequency. If the components are placed in series, the network will have a very low impedance which increases at either side of the resonant frequency. The resonant frequency of an LC network is given by:

$$f = \frac{1}{2\pi\sqrt{LC}}$$

A full treatment of reactive components requires a good understanding of complex algebra. Interested readers should refer to any of the better electronics and RF textbooks.

DECIBELS

Contrary to much popular usage, the decibel (dB) is not actually a unit of any particular quantity, but rather an expression of the ratio between two quantities, such as power, voltage, current and acoustic pressure.

Many sensors, including our own ears respond to stimuli in a logarithmic fashion, allowing them to detect a huge range of intensities. As the dB compares the logarithms of quantities, it agrees with our perceptive comparisons.

To calculate the ratio, in dB, of two power levels, P1 and P2, the formula is:

dB=10log (P1/P2)

If the quantities are voltages, currents or sound pressure levels, X1 and X2, the formula becomes:

dB=20log (X1/X2)

If the quantities, X1 and X2, are both measured in the same impedances, their dB ratio will be numerically equal to the dB ratio of their equivalent powers. If their impedances, Z1 and Z2, are unequal, the dB ratio of their powers can be found from:

dB=20log (X1/X2) +10log (Z2/Z1)

Negative dB values result when P1 (or X1) is less than P2 (or X2), while positive values indicate that P1 (or X1) is greater than P2 (or X2). Although the dB is not an absolute unit, certain absolute units using the dB scale have been devised. These include dBuV, dBm and dBSPL. dBuV is a logarithmic expression of a voltage compared to 1uV (microvolt). Thus, 76 dBuV is equivalent to 6.31 mV (millivolts).

dBm is an expression of a power level compared to 1mW (milliwatt). -20dBm is therefore equivalent to 10uW. Furthermore, because the unit dBm is specifically a measure of power, 0dBm represents 775mV in a 600 ohm impedance but 224mV in a 50 ohm impedance.

dBSPL is a measure of sound pressure level.

Although usually referred to 20.4uPa (micropascals), other reference levels may be specified. Using 20uPa as a reference, 1 Pascal equates to 93.8 dBSPL.

INDUCTOR DESIGN

There are no simple, generalised equations for inductor design. However, equations for a few special cases will allow inductors to be designed for a wide range of applications.

1. Single-layer air cored coils of length at least equal to radius. Useful in RF applications.

$$L = \frac{N^2 r^2}{254(0.9r+l)}$$

Where L = inductance in uH
N= number of turns
l = coil length in mm
r = coil radius in mm

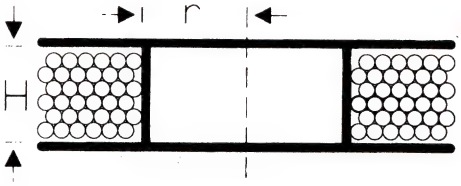
2. Multi-layer air cored coils of height equal to inner radius. Useful for loudspeaker crossovers etc.

$$H = 0.34\sqrt{\frac{L}{R}}$$

$$N = 19.9\sqrt{\frac{L}{H}}$$

$$d = \frac{0.841H}{\sqrt{N}}$$

Where L = inductance in uH
N = number of turns
H = coil height in mm
d = wire diameter in mm
R = coil's d.c. resistance in ohms



3. Multi-layer air cored similar to (2) but with height equal to one half of the coil's inner radius.

$$H = 0.323\sqrt{\frac{L}{R}}$$

$$N = 13.2\sqrt{\frac{L}{H}}$$

$$d = \frac{0.738H}{\sqrt{N}}$$

Where the symbols have the same meaning as in (2).

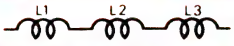
4. Coils wound on high permeability core materials such as ferrites.

$$N = T\sqrt{\frac{L}{A_L}}$$

Where L = inductance of coil
A_L = the inductance of T turns of the particular core

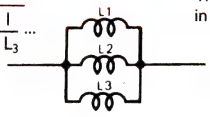
INDUCTORS IN SERIES

$L_T = L_1 + L_2 + L_3 + ...$



INDUCTORS IN PARALLEL

$$L_T = \frac{1}{\frac{1}{L_1} + \frac{1}{L_2} + \frac{1}{L_3} ...}$$



Two inductors in parallel

$$L_T = \frac{L_1 \times L_2}{L_1 + L_2}$$

CIRCUIT LAWS

OHM'S LAW

The relationship between voltage, current and resistance in a circuit is defined by Ohm's law, which may be simply stated by the formula:

E = I x R where E is in volts, I is in amps and R is in ohms.

This can be turned around to look like:

$$I = \frac{E}{R} \qquad R = \frac{E}{I}$$

POWER IN A CIRCUIT

When a current passes through a component, energy is given off in the form of heat. Normally, we associate resistors with this action; that's part of their job. We often need to know how much power is being given off by a resistor and we find this out by using the formula:

P = E x I where P is in watts, E is in volts and I is in amps.

This formula too can be turned around if required:

$$E = \frac{P}{I} \qquad R = \frac{P}{E}$$

RESISTORS IN SERIES

Resistors in a series circuit are simply added together to find the total resistance. In other words, a 10 ohm, 150 ohm and 1000 ohm-resistor connected in series would be the equivalent of a single 1,160 ohm resistor.

The formula is:

$R_T = R_1 + R_2 + R_3 + ...$

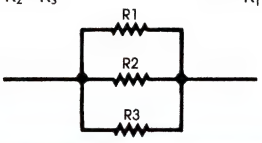
RESISTORS IN PARALLEL

Resistors in a parallel circuit are a little more difficult. The formula to use is:

$$R_T = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} ...}$$

Two resistors in parallel

$$R_T = \frac{R_1 \times R_2}{R_1 + R_2}$$



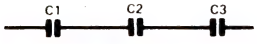
CAPACITORS IN SERIES

Capacitors in series, on the other hand, are similar to resistor in parallel. You add the reciprocals:

$$C_T = \frac{1}{\frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3} ...}$$

Two capacitors in series

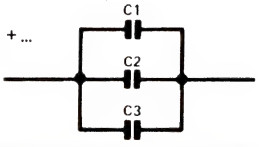
$$C_T = \frac{C_1 \times C_2}{C_1 + C_2}$$



CAPACITORS IN PARALLEL

Capacitors behave exactly the opposite to resistors; when capacitors are in **parallel**, you add them:

$C_T = C_1 + C_2 + C_3 + ...$



WIRE AND COAXIAL CABLE SPECIFICATIONS

TYPE	NOM. IMP ZO	OUTER DIA. (mm)	NOM. ATTENUATION (dB/100M) 50 MHz	100 MHz	200 MHz	400 MHz	1GHz	VEL. FACTOR %	CAP. pF/m	VOLT. VRMS
RG-6/U	75	6.85	4.9	6.9	10.2	14.4	19.7	78	57.2	–
RG-8/U	52	10.3	5.2	7.2	10.5	15.4	29.2	66	96.8	5000
RG-9/U	51	10.67	5.2	7.2	10.5	15.4	29.2	66	98.4	5000
RG-11/U	75	10.29	4.3	6.6	9.5	13.8	23.3	66	67.3	5000
RG-58/U	53.5	4.95	10.2	14.8	22.3	32.8	55.8	66	93.5	1900
RG-58A/U	50	4.95	10.8	416.1	23.9	37.7	70.5	66	101	1900
RG-58C/U	50	4.95	10.8	16.1	23.9	37.7	70.5	66	101	1900
RG-59/U	73	6.15	7.9	11.2	16.1	23.3	39.4	66	68.9	2300
RG-59B/U	75	6.15	7.9	11.2	16.1	23	39.4	66	67.3	2300
RG-62/U	93	6.04	6.2	8.9	12.5	17.7	28.5	84	44.3	700
RG-62B/U	93	6.15	6.6	9.5	13.8	20	36.1	84	44.3	700
RG-122/U	50	4.06	14.8	23	32.8	49.9	87	66	101	1900
RG-141A/U	50	4.83	6.9	10.5	15.4	22.6	42.7	69.5	95.1	1900
RG-142B/U	50	4.95	8.9	12.8	18.4	26.9	44.3	69.5	95.2	1900
RG-174/U	50	2.56	21.7	29.2	39.4	57.4	98.4	66	101	1500
RG-178B/U	50	1.83	34.4	45.9	62.3	91.9	150.9	69.5	95.1	1000
RG-179B/U	75	2.54	27.9	32.8	41.0	52.5	78.7	69.5	64	1200
RG-180B/U	95	3.56	15.1	18.7	24.9	35.1	55.8	69.51	49.2	1500
RG-187A/U	75	2.66	27.9	32.8	41	52.5	78.7	69.5	64	1200
RG-188A/U	50	2.59	31.5	37.4	46.6	54.8	101.7	69.5	95.2	1200
RG-196A/U	50	1.93	34.4	45.9	62.3	91.9	150.9	69.5	95.2	1200
RG-213/U	50	10.29	5.2	7.2	10.5	15.4	29.2	66	101	5000
RG-214/U	50	10.8	5.2	7.2	10.5	15.4	29.2	66	101	5000
RG-223/U	50	5.38	10.1	14.8	21	30.2	53.5	66	101	1900
RG-303/U	50	4.31	6.9	10.5	15.4	22.6	42.7	69.5	95.2	1900
RG-316/U	50	2.49	30.8	34.1	43.3	54.1	101.7	69.5	95.2	1200
BEL 9913	50	10.29	3.0	4.6	5.9	8.5	14.8	84	78.7	–

N.B. Except for Belden 9913, all specifications are referenced to MIL-C-17D/F or JAN-C-17A as applicable. Actual cables often exhibit lower losses than those specified above.

WINDING WIRE DATA

B&S	SWG GAUGES	METRIC mm	DIA. MILS	OHMS PER 1000FT	DIA. mm	OHMS PER km
12	–	–	80.81	1.588	2.053	5.210
–	14	–	80.00	1.658	2.032	5.440
–	–	2.000	78.74	1.673	2.000	5.448
–	15	–	72.00	2.001	1.829	6.563
13	–	–	71.96	2.003	1.828	6.572
–	–	1.800	70.87	2.065	1.800	6.775
14	–	–	64.08	2.525	1.628	8.284
–	16	–	64.00	2.532	1.626	8.307
–	–	1.600	62.99	2.614	1.600	8.575
15	–	–	57.07	3.184	1.450	10.47
–	17	–	56.00	3.307	1.422	10.85
–	–	1.400	55.12	3.414	1.400	11.20
16	–	–	50.82	4.016	1.291	13.18
–	–	1.250	49.21	4.282	1.250	14.05
–	18	–	48.00	4.501	1.219	14.77
17	–	–	45.26	5.064	1.150	16.61
–	–	1.120	44.09	5.333	1.120	17.50
18	–	–	40.30	6.385	1.024	20.95
–	–	1.000	39.37	6.691	1.000	21.95
–	20	–	36.00	8.002	0.9144	26.25
19	–	–	35.89	8.051	0.9119	26.41
–	–	0.9000	35.51	8.222	0.9000	27.10
–	21	–	32.00	10.13	0.8128	33.23
20	–	–	31.96	10.15	0.8120	33.30
–	–	0.800	31.50	10.45	0.8000	34.30
21	–	–	28.46	12.80	0.7231	41.99
–	22	–	28.00	13.23	0.7112	43.40
–	–	0.7100	27.95	13.27	0.7100	43.55
22	–	–	25.35	16.14	0.6440	52.95
–	–	0.6300	24.80	15.85	0.6300	55.31
–	23	–	24.00	18.00	0.6096	59.07
23	–	–	22.57	20.36	0.5734	66.80
–	–	0.5600	22.04	21.33	0.5600	70.00
–	24	–	22.00	21.43	0.5588	70.30
24	–	–	20.10	25.67	0.5107	84.22
–	25	–	20.00	25.93	0.5080	85.06
–	–	0.5000	19.69	26.76	0.5000	87.81
–	26	–	18.00	32.01	0.4572	105.0
25	–	–	17.90	32.37	0.4548	106.2
–	–	0.4500	17.72	33.04	0.4500	108.4
–	27	–	16.40	38.55	0.4162	126.5
26	–	–	15.94	40.81	0.4050	133.9
–	–	0.4000	15.75	41.28	0.4000	137.2
–	28	–	14.80	47.35	0.3759	155.3
27	–	–	14.20	51.47	0.3608	168.9
–	–	0.3550	13.97	53.10	0.3550	174.2
–	29	–	13.60	56.07	0.3454	184.0
28	–	–	12.64	64.90	0.3211	212.9
–	30	0.3150	12.40	67.45	0.3150	221.2
–	31	–	11.60	77.07	0.2946	252.9
29	–	–	11.26	81.83	0.2861	268.5
–	–	0.2800	11.02	85.34	0.2800	280.0
–	32	–	10.80	88.91	0.2743	291.7
30	–	–	10.03	103.2	0.2548	338.6
–	33	–	10.00	103.7	0.2540	340.2
–	–	0.2500	9.842	107.0	0.2500	351.2
–	34	–	9.200	122.5	0.2337	402.0
31	–	–	8.928	130.1	0.2268	426.8
–	–	0.2240	8.819	133.3	0.2240	437.5
–	35	–	8.400	147.0	0.2134	482.2
32	–	–	7.950	164.1	0.2020	538.4
–	36	–	7.600	179.5	0.1930	589.1
–	–	0.1800	7.087	206.5	0.1800	677.5
33	–	–	7.080	206.9	0.1799	678.8
–	37	–	6.800	224.3	0.1727	735.8

Note: Dick Smith Electronics does not stock all cables and wires shown. Data is presented for comparative purposes.

COPPER CABLE CHARACTERISTICS

NUMBER & SIZE OF STRANDS	NOMINAL CONDUCTOR AREA (SQ. mm)	NOMINAL CURRENT RATING (AMPS)	MAXIMUM RESISTANCE PER METRE (OHMS 35°C)	NEAREST EQUIVALENT AWG (B&S)
10 x 0.12	0.11	1.1	0.17	27
7 x 0.16	0.14	1.4	0.13	26
1 x 0.5	0.20	2.0	0.10	24
14 x 0.14	0.22	2.2	0.088	24
7 x 0.2	0.22	2.2	0.086	24
1 x 0.6	0.28	2.8	0.067	23
1 x 0.7	0.38	3.8	0.049	21
14 x 0.2	0.44	4.4	0.043	21
10 x 0.25	0.49	4.9	0.039	20
50 x 0.12	0.55	5.0	0.035	20
60 x 0.12	0.68	6.8	0.028	19
89 x 0.1	0.70	7.0	0.027	19
24 x 0.2	0.75	7.5	0.025	18
30 x 0.2	0.94	9.4	0.020	17
1 x 1.13	1.0	10.0	0.019	17
32 x 0.2	1.0	10.0	0.019	17
512 x 0.05	1.0	10.0	0.019	17
7 x 0.5	1.4	14.0	0.014	16
30 x 0.25	1.5	15.0	0.013	15
26 x 0.3	1.8	17.0	0.010	15
26 x 0.32	2.1	19.0	0.0091	14
7 x 0.67	2.5	22.0	0.0077	13
1 x 1.78	2.5	22.0	0.0076	13
252 x 0.127	3.2	29.0	0.0059	12
41 x 0.32	3.3	30.0	0.0057	12
315 x 0.12	3.6	30.0	0.0053	12
630 x 0.12	7.1	50 max.	0.0027	1
1666 x 0.12	18.8	120 max.	0.0010	–

Note: The nominal current ratings are intended as guidelines for low power, electronics, communications and control applications only.

PROPERTIES OF COPPER

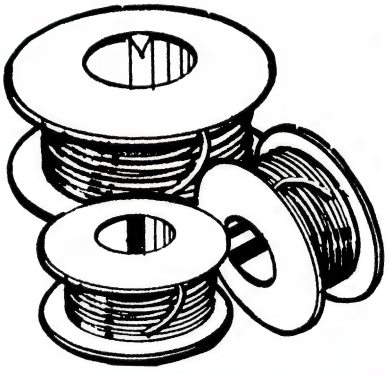
(Based upon the IEC International Annealed Copper Standard.)

Volume Resistivity @ 20°C 0.0000017241 ohm-cm

Mass Resistivity @ 20°C 0.15328 ohm-grams/sq. metre

Temperature Coefficient @ 20°C 0.0039

Tensile Strength: 2350 kg/sq. cm



CHOOSE THE RIGHT CABLE

The following 6 steps should help when trying to choose a suitable wire size for hooking up marine and auto accessories, extension speakers and the like.

1 Decide how much of the available supply voltage you are prepared to lose. All practical wires have some finite resistance, so it is impossible not to lose some voltage.

2 Divide the figure obtained in (1) by the maximum current which you expect to draw through the wire. This result is the tolerable resistance of your wiring.

3 Divide the result obtained in (2) by the total length (in metres) of the wiring loop. Include the distance from the power source to the load, and back again. This result is the maximum resistance of the desired wire in ohms per metre.

4 From the chart above, select a wire which has a 'Resistance per Metre' figure which is equal to or less than the desired value.

5 Check that the 'Nominal Current Rating' in the table is not exceeded. If it is, then you may need to select a larger wire size with an adequate rating. While the figures given are conservative, they must not be exceeded in 240V applications and may need derating in higher temperature situations.

6 Finally, when purchasing the wire, verify that its insulation is rated to withstand the voltage and temperature for your particular application.

Example:

You wish to install a 12V, 55W light on a boat. The current drawn by the light will be (55/12) 4.6 amps. You calculate that the length of the wiring loop is 5 metres.

Step 1 Lets say that you'll tolerate a loss of 5% of the available 12 volt supply, i.e. 0.6 volts.

Step 2 Divide 0.6 volts by 4.6 amps to obtain 0.13 ohms.

Step 3 Divide 0.13 ohms by 5 metres to obtain 0.026 ohms per metre.

Step 4 Referring to the chart, you will find that 24 x 0.2 mm wire appears to be suitable as its resistance is 0.025 ohms per metre.

Step 5 The Nominal Current Rating for this cable is 7.5 amps and on this basis it is still suitable.

Step 6 As you are dealing with a 12V system and are able to keep the wire away from hot areas and protect it from abrasion, there is unlikely to be any problem related to the insulation.

BIPOLAR TRANSISTORS

TYPE	CASE	POL MAT	VCE	VCB	IC mA	VCES @	IC mA	hFE	@ IC mA	FT MHz	@ IC mA	PTOT mW	USE	COMPARABLE TYPES
BC107	TO-18	NS	45	50	100	0.25	10	110-450	2	300	10	300	G.P. S.S. Amp.	BC207, BC147, BC182
BC108	TO-18	NS	20	30	100	0.25	10	110-800	2	300	10	300	G.P. S.S. Amp.	BC208, BC148, BC183
BC109	TO-18	NS	20	30	100	0.25	10	200-800	2	300	10	300	Low Noise S.S. Amp	BC209, BC149, BC184
BC109C	TO-18	NS	20	30	100	0.25	10	420-800	2	300	10	300	Low Noise High Gain	BC209C, BC149C, BC184C
BC177	TO-18	PS	45	50	100	0.3	10	75-260	2	150	10	300	G.P. S.S. Amp.	BC157, BC307, BC212
BC178	TO-18	PS	25	30	100	0.3	10	75-500	2	150	10	300	G.P. S.S. Amp.	BC158, BC308, BC213
BC179	TO-18	PS	20	25	100	0.3	10	125-500	2	150	10	300	G.P. S.S. Amp.	BC159, BC309, BC214
BC327	TO-92VAR1	PS	45	50	500	0.7	500	100-600	100	100	10	625	Output	2N3638
BC328	TO-92VAR1	PS	25	30	500	0.7	500	100-600	100	100	10	625	Output	BC327
BC337	TO-92VAR1	NS	45	50	500	0.7	500	100-600	100	100	10	625	Output	2N3642
BC338	TO-92VAR1	NS	25	30	500	0.7	500	100-600	100	100	10	625	Output	BC337
BC546	TO-92VAR1	NS	65	80	100	0.6	100	110-450	2	300	10	500	G.P. S.S. Amp.	
BC547	TO-92VAR1	NS	45	50	100	0.6	100	110-800	2	300	10	500	G.P. S.S. Amp.	BC107, BC207, BC147
BC548	TO-92VAR1	NS	30	30	100	0.6	100	110-800	2	300	10	500	G.P. S.S. Amp.	BC108, BC208, BC148
BC549	TO-92VAR1	NS	30	30	100	0.6	100	200-800	2	300	10	500	Low Noise S.S. Amp.	BC109, BC209, BC149
BC549C	TO-92VAR1	NS	30	30	100	0.6	100	420-800	2	300	10	500	Low Noise High Gain	BC109C, BC149C
BC556	TO-92VAR1	PS	65	80	100	0.65	100	75-475	2	200	10	500	G.P. S.S. Amp.	
BC557	TO-92VAR1	PS	45	50	100	0.65	100	75-800	2	200	10	500	G.P. S.S. Amp.	BC157
BC558	TO-92VAR1	PS	30	30	100	0.65	100	75-800	2	200	10	500	G.P. S.S. Amp.	BC158
BC559	TO-92VAR1	PS	30	30	100	0.65	100	125-800	2	200	10	500	G.P. S.S. Amp.	BC159
BC639	TO-92(74)	NS	80	100	1A	0.5	500	40-250	150	130		1W	Audio O/P	MU9610, TT801
BC640	TO-92(74)	PS	80	100	1A	0.5	500	40-250	150	50		1W	Audio O/P	MU9660, TT800
BD139	TO-126	NS	80	100	1.5A	0.5	500	40-250	150	250	50	8W	G.P. O/P	40409
BD140	TO-126	PS	80	100	1.5A	0.5	500	40-250	150	75	50	8W	G.P. O/P	40410
BD262	TO-126	PS	60	60	4A	2.5	1.5A	750	1.5A	7	1.5A	36W	High Gain Darl. O/P	BD266
BD263	TO-126	NS	60	80	4A	2.5	1.5A	750	1.5A	7	1.5A	36W	High Gain Darl. O/P	BD267
BD266A	TO-220	PS	80	80	8A	2	3A	750	3A	7		60W	High Gain Darl. O/P	
BD267A	TO-220	NS	80	100	8A	2	3A	750	3A	7		60W	High Gain Darl. O/P	
BD681	TO-126	NS	100	100	4A	2.5	1.5A	750	1.5A	1		40W	Darlington O/P	BD263
BD682	TO-126	PS	100	100	4A	2.5	1.5A	750	1.5A	1		40W	Darlington O/P	BD262
BF173	TO-72(28)	NS	25	40	25			40-100	7	550	5	230	T.V. I.F. Amp.	
BF199	TO-92VAR2	NS	25	40	25			37	7	550		500	H.F. Amp.	BF180
BF463	TO-202	PS	250	250	500			40-180	30	20		2W	H.V. Med. Pwr.	
BF469	TO-126	NS	250	250	50			50	25	60	10	1.8W	G.P. High-V. Amp.	
BF470	TO-126	PS	250	250	50			50	25	60	10	1.8W	G.P. High-V. Amp.	
BFR90	SOT-37(2)	NS	15	20	25			25-250	14	5GHz	14	180	Wide Band Amp.	
BFR91	SOT-37(2)	NS	12	15	35	0.3	30	25-250	30	5GHz	30	180	Wide Band Amp.	
BFY90	TO-72(25)	NS	15	30	25			25-125	2	1GHz	2	200	Wideband Amp.	
BUX80	TO-3	NS	400	800	10A	1.5	5A	30	1.2A	8		100W	Deflection, High Current SW	
MJ802	TO-3	NS	90	100	30A	0.8	7.5A	25-100	7.5A	2	1A	200W	High Power Output	
MJ2955	TO-3	PS	60	70	15A	1.1	4A	20-70	4A	2.5	500	115W	G.P. Power	
MJ4502	TO-3	PS	90	100	30A	0.8	7.5A	25-100	7.5A	2	1A	200W	High Power Output	
MJ10012	TO-3	NS	400	600	10A	2	6A	100-2K	6A			175W	Power Darlington	
MJ15003	TO-3	NS	140	140	20A	1	5A	25-150	5A	2	500	250W	High Power Output	
MJ15004	TO-3	PS	140	140	20A	1	5A	25-150	5A	2	500	250W	High Power Output	
MJE340	TO-126	NS	300		500	0.75	100	30-240	50			20W	G.P. H.V. Power	
MJE350	TO-126	PS	300		500	0.77	100	30-240	50			20W	G.P. H.V. Power	
MJE2955T	TO-220	PS	60	70	10A	1.1	4A	20-100	4A	2	500	75W	G.P. Power	TIP2955
MJE3055T	TO-220	NS	60	70	10A	1.1	4A	20-100	4A	2	500	75W	G.P. Power	TIP3055
MPSA14	TO-92(72)	NS	30	30	500	1.5	100	20000	100	125	10	625	G.P. Darlington	
MPSA65	TO-92(72)	PS	30	30	500	1.5	100	20000	100	100	10	625	G.P. Darlington	
MRF629	TO-39A	NS	16	36	400			20-200	100			5W	UHF Power	
MRF660	TO-220A	NS	16	36	2.4A			20-160	250			25W	UHF Power	
PN100	TO-92(72)	NS	35	60	500	0.5	100	60-240	150	350	50	600	G.P. Amp/Switch	PN2222, 2N3643
PN2907	TO-92(72)	PS	40	60	600	0.4	150	100-300	150	200	50	625	High S. Switch	
PN200	TO-92(72)	PS	35	60	500	0.5	150	50-400	150	200	50	600	G.P. Amp/Switch	2N3638, BC214, PN3645
TIP31B	TOP-66	NS	80	80	3A	1.2	3A	25	1A	3	500	40W	Power Output	
TIP32B	TOP-66	PS	80	80	3A	1.2	3A	25	1A	3	500	40W	Power Output	
TIP142	TOP-3	NS	100	100	10A	2	5A	>1000	5A			125W	Audio Output	TIP140, TIP141
TIP147	TOP-3	PS	100	100	10A	2	5A	>1000	5A			125W	Audio Output	TIP145, TIP146
TIP2955	TOP-3	PS	70	100	15A	1.1	420	20	4A	3	500	90W	Power Output	MJE2955
TIP3055	TOP-3	NS	70	100	15A	1.1	4A	20	4A	3	500	90W	Power Output	MJE3055
2N2222A	TO-18	NS	40	75	800	1.6	500	100-300	150	300	20	500	High S. Switch	
2N3019	TO-39	NS	80	140	1A	0.5	500	50-100	500	100	50	800	H.F. Amp	
2N3053	TO-39	NS	40	60	700	1.4	150	50-250	150	100	50	2.86W	G.P. Sw	BD137
2N3054	TO-66	NS	60	90	4A	0.1	200	25-100	500	0.8	200	25W	Audio Output	TIP31B
2N3055	TO-3	NS	60	70	15A	1.1	4A	20-70	4A	2.5	500	115W	G.P. Power	BDY20
2N3563	TO-106	NS	15	30	50			20-200	8	600	8	200	RF – IF Amp	BF173
2N3564	TO-106	NS	15	30	100	0.3	20	20-500	15	400	15	200	RF – IF Amp	BF167
2N3565	TO-106	NS	25	30	50	0.35	1	150-600	1	400	1	200	Low Level Amp	BC108, BC208
2N3566	TO-105	NS	30	40	200	1	100	150-600	10	40	30	300	G.P. Amp & Sw	BC183
2N3567	TO-105	NS	40	80	500	0.25	150	40-120	150	60	50	300	G.P. Amp & Sw	BC337
2N3568	TO-105	NS	60	80	500	0.25	150	40-120	150	60	50	300	G.P. Amp & Sw	
2N3569	TO-105	NS	40	80	500	0.25	150	100-300	150	60	50	300	G.P. Amp & Sw	
2N3638A	TO-105	PS	25	25	500	0.25	50	100	50	150	50	300	G.P. Amp & Sw	BC328
2N3641	TO-105	NS	30	60	500	0.22	150	40-120		250	50	350	G.P. Amp & Sw	BC337
2N3642	TO-105	NS	45	60	500	0.22	150	40-120		250	50	350	G.P. Amp & Sw	BC337
2N3643	TO-105	NS	30	60	500	0.22	150	100-300	150	250	50	350	G.P. Amp & Sw	BC337
2N3644	TO-105	PS	45	45	500	1	300	100-300	150	200	20	300	G.P. Amp & Sw	BC327
2N3645	TO-105	PS	60	60	500	1	300	100-300	150	200	20	300	G.P. Amp & Sw	
2N3771	TO-3	NS	40	50	30A	2	15A	15-60	15A	0.2	1A	150W	Power Output	
2N3866	TO-39	NS	30	55	400			10-200	50	500	50	1W	VHF Amp	
2N3904	TO-92(72)	NS	40	60	200	0.2	10	100-300	10	300	10	310	Low Level Amp	BC167A, BF194
2N3905	TO-92(72)	PS	40	40	200	0.4	50	50-200	10	200	20	310	G.P. Amp & Sw	
2N3948	TO-39	NS	20	36	400			15	50	700	50	1W	VHF Amp	
2N4030	TO-39	PS	60	60	1A	0.5	500	25	500	260	100	800	G.P. Amp & Sw	
2N4250	TO-106	PS	40	40	100	0.25	10	250-700	0.1	50		200	Low Level Amp	BC559
2N4258	TO-106	PS	12	12	50	0.5	50	30-120	10	700	10	200	Saturated Sw	
2N4427	TO-39	NS	20	40	400	0.4	100	10-200	100	500	50	1W	VHF/UHF Driver	2N3866
2N5401	TO-92(72)	PS	150	160	6000	0.5	50	60-240	10	100	10	625	H.V. Switch	MPSL51
2N6557	TO-202	NS	250	250	500			>40	50	45		2W	H.V. Med Pwr	
2SC710	TO-92/76	NS	25	30	30			90	1	100		200	G.P. RF Amp	BFS18
2SC1306	TOP-66	NS	65	65	3A			40-200	500	300		12W	H.F. Output	2SC2166
2SC1307	TOP-66	NS	70	70	8A			20-150	2A	150		25W	H.F. Output	2SC1969
2SC1674	TO-92(74)	NS	20	30	20	0.3	10	40-180	1	600	1	250	VHF Amp	
2SC1969	TOP-66	NS	30	60	6A			10-180	10	150		20W	H.F. Output	2SC1307
2SC2166	TOP-66	NS	75	75	4A			35-180	100					
2SC2694	T-40	NS	17	35	20A			10-180	1A	800		140W	VHF Output	MRF247
2SC3355	TO-92(74)	NS	12	20	100			50-300	20	6.5GHz	20	600	UHF SS	MRF573
2SC3358	MX	NS	12	20	100			50-300	20	7GHz	20	250	UHF SS	MRF573

Note: Some small signal transistors may have a TO-92 case and a "PN" prefix. The electrical specifications are the same, only the case is changed. See case outline TO-92(72) for pin detail.
Not all devices in this section are stocked by Dick Smith Electronics.

TRIACS

TYPE	CASE	VDRM	IT (R.M.S.) (A)	IFSM (A)	IGT (mA)	VGT (T = 25°C)	PG (AV) (W)	IH (mA)	DV/DT (V/uS)	COMMENTS (25°C)
BT137-500	TO-220	500	8	55	35 (70-+)	1.5	0.5	20	100	(Gate o/c)
BT139-500	TO-220	500	16	140	35 (75-+)	1.5	0.5	30	100	(Gate o/c)
BT139-600	TO-220	600	16	140	35 (75-+)	1.5	0.5	30	100	(Gate o/c)
BTA10-600B	TO-220	600	10	100	50 (100-+)			50	100 @400V	(Isolated Tab)
BTA41-600B	TOP-3	600	40	300	50 (100-+)	1.5	1.0	80	250	(Isolated Tab)
Q4006L4	TO-220	400	6	65	25 (50-+)	2.5 max all modes	0.9	60 max	100 typ	(Gate o/c)
SC141D	TO-220	400	6	74	50 (50-+)	2.5 "	0.5	50 max	100 typ	(Gate o/c)
SC146D	TO-220	400	10	110	50 (50-+)	2.5 "	0.5	50 max	150 typ	(Gate o/c)
SC151D	TO-220	400	15	110	50 (50-+)	2.5 "	0.5	50 max	250 typ	(Gate o/c)

FETS

FETS	CASE	BVGSS V	@ IG (uA)	VGS (OFF) MIN	MAX	@ VDS	ID (nA)	IDSS(mA) MIN	MAX	@ VDS	VGS	YFS (UMHOS) MIN	MAX	@ VDS	PTOT mW	USE/COMMENTS
BF245B	TO-92 Var 1	30	1	0.5	8	15	10	6	15	15	0	3000	6500	15	300	N/CH Junction Audio to H.F.
BF981	SOT-103	>6		2.5		10	20uA	4	25	10	0	14000 typ.			225	N/CH Dual Gate MOS.VHF AMP.
BF998	SMT	>6	±10		2.5	8	20uA	2	18	10	0/4	24000 typ.		8	200	N/CH VHF/UHF Dual Gate SMT
BFR84	TO-72(2)	>6	100	1.5	3.8	10		20	55	10	0	15000 typ.		10	300	N/CH VHF Dual Gate
MFE131	TO-72(2)	±6	±10		4	15	200uA		30	15	0	8000	20000	15	300	N/CH Dual Gate MOS.VHF Amp.
MPF102	TO-92(72)	25	10	0.5	8	15	2	2	20	15	0	2000	7500	15	310	N/CH Junction – VHF
MPF105	TO-92(72)	25	1		8	15	10	4	16	15	0	2000	6000	15	310	N/CH Junction – Audio Sw.
MPF106	TO-92(72)	25	1	0.5	4	15	10	4	10	15	0	2500	7000	15	310	N/CH Junction – RF
MPF131	262	±6	±10		4	15	200uA	3	30	15	0	8000	20000	15	350	N/CH Dual Gate MOS.VHF Amp
2N4342	TO-92(72)	25	10		5	10		12	30	10	0		6000	10	180	P/CH Junction – Audio Sw.
2N5245	TO-92(77)	30	1	1.5	6	10		1	18		0	5800 typ.		10	360	N/CH VHF/UHF MIXER
2N5459	TO-92(72)	25	1	2	8	15	10	4	9	15	0	2000	6000	15	310	N/CH Junction – Audio Sw.
2N5484	TO-92(72)	25	1	0.3	3	15	10	1	5	15	0	3000	6000	15	310	N/CH Junction – VHF
2N5485	TO-92(72)	25	1	0.5	4	15	10	4	10	15	0	3500	7000	15	310	N/CH Junction – VHF
2N5486	TO-92(72)	25	1	2	6	15	10	8	20	15	0	4000	8000	15	310	N/CH Junction – VHF
3SK40	TO-72(2)	±6	±10		4	15	200uA		25	15	0	8000		15	250	N/CH Dual Gate MOS.VHF Amp.
3SK121	2-6F1A	–5		–2.5	4	5	100uA	20	45	5	0	17000 typ.		10	200	N/CH UHF GaAs Dual Gate

POWER FETS

TYPE	CASE	PTOT (W)	VDS (MAX) (V)	ID (MAX) (A)	VGS MIN	(THRES.) MAX	GFS UMHOS	CLSS (pF)	RDS (OHMS)	COMMENT
BUK456-60A	TO-220	150	60	52	2.1	4	17M	2000	0.028	Inverters
BUK456-60A	TO-220	150	60	52	2.1	4	17M	2000	0.028	Inverters
BUK457-600B	TO-220	150	600	7.1	2.1	4	8M typ.	1800	1.2	Mains SMPS
BUZ71A	TO-220	40	50	13	2.1	4	4M	600	0.12	Nch Power MOSFET
IRF520	TO-220	60	100	9.2	2	4	4M	350	0.25	Nch Power MOSFET
MTP3055E	TO-220	40	60	12	2	4.5	4M	500	0.15	Nch Power MOSFET
VN10K	TO-92(76)	1	60	0.3	0.3	2.5	100K	48	5	Nch DMOS FET
VN88AF	TO-202F	12.5	80	2	0.8	2				Nch VMOS FET
2SJ48	TO-3	100	120	7	0.15	1.45	1M	900	1	Pch Power MOSFET
2SJ49	TO-3	100	140	7	0.15	1.45	1M	900	1	Pch Power MOSFET
2SJ162	TOP-3	100	160	7	0.15	1.45	1M	900	1	Pch Power MOSFET
2SK133	TO-3	100	120	7	0.15	1.45	1M	600	1	Nch Power MOSFET
2SK134	TO-3	100	140	7	0.15	1.45	1M	600	1	Nch Power MOSFET
2SK1058	TOP-3	100	160	7	0.15	1.45	1M	600	1	Nch Power MOSFET

SMALL SIGNAL DIODES

TYPE	CASE	VR	IF (mA)	CD (pF)	VF	@ IF (mA)	IR (uA)	@ VR	TRR (nS)	USE /COMPARABLE TYPES
Germanium										
OA47	DO-7	25	110	3.5	0.45	10	100	25	70	Gold Bonded G.P. Switching
OA90	DO-7	20	45		1.5	10	450	20		G.P. Point Contact OA70, OA80
OA91	DO-7	90	50		1.9	10	180	75		G.P. Point Contact OA71, 79, 81
DSOA91	DO-7	50	30	1	1	5	200	10		G.P. OA91, 1N60
1N60	DO-7	40	30	1	0.05	0.375	200	10		AM/FM Detector
OA95	DO-7	90	50		1.5	10	110	0.75		G.P. Point Contact
Silicon										
BA102	DO-7	20		20-45	Cd Ratio 1.4	@ 4V/10V				Variable Capacitance
BA234/4	DO-35	20	100	<2	1	100	0.1	15		UHF Sw.
BAW62	SOD-27	75	200	2	0.75	5	5	75	4	High Speed Silicon Sw.
BB119	DO-35	15		20-25 @ 4V	Cd Ratio >1.3	@ 4V/10V				Varicap – replaces BA102
BB122	DO-35	30		12 @ 3V	Cd Ratio 5.2		0.05	28		Varicap VHF UHF
BB212	TO-92	12		500-620 @ 0.5V	Cd Ratio >22.5	@ 0.5V/8V	0.05	10		AM Dual Varicap
1N914A	DO-35	75	75	4	1	10	5	75	4	Small Signal Sw. 1N4148
1N4148	DO-35	75	200	4	1	10	0.025	20	4	Small Signal Sw. 1N914A
1N4448	DO-35	75	300	4	1	100	0.025	6	4	G.P. Silicon Sw. 1N4148
5082-2800	DO-7	70	15	2	0.41	1	0.2	50	0.1	Schottky (Hot Carrier) UHF Detector, Mixer Switch

RECTIFIERS

TYPE	VR	IF (A)	IFSM (A)	VF	@ IF (A)	IR (uA)	@ VR	USE
BYX98/600	600	10	75	1.4	10	200	600	Power Rectifier Stud Mount
1N4004	400	1	30	1.1	1	5	400	G.P. Rectifier
1N4007	1000	1	30	1.1	1	5	1000	G.P. Rectifier
BY229-400	400	7	60	1.85	20			SMPS trr = 150nS
1N4936	400	1	30	1.3	1	5	400	SMPS trr = 200nS
1N5404	400	3	200	1.1	3	5	400	G.P. Rectifier
1N5408	1000	3	200	1.1	3	5	1000	G.P. Rectifier
P600M	1000	6	400	0.9	6	25	1000	G.P. Rectifier
FB5006	600	50	500	1.2 (per leg)	25	10	600	High Current Bridge
3504	400	35	400	1.2 (per leg)	17.5	10	400	High Current Bridge
PO4	400	6		1.3 (per leg)	6	10	400	Medium Duty Mini Bridge
KBL04	400	4	200	1.1 (per leg)	3	10	400	G.P Bridge
KBPC804	400	8	200	1.0 (per leg)	4	10	400	High Current Bridge
KBL10/407	1000	4	200	1.1 (per leg)	2	10	1000	G.P. Bridge SIL pins
WO4	400	1.5	50	1.1 (per leg)	1	10	400	Mini Bridge
WO6	600	1.5	30	1.1 (per leg)	1	10	600	G.P Bridge
2WO6	600	2	50	1.0 (per leg)	1	10	600	G.P Bridge
DB155G	600	1.5	50	1.1 (per leg)	1	10	600	Mini Bridge DIL pins
1N5819	40	1	25	0.6	1	1mA	40	Schottky Barrier
1N5822	40	3	80	0.525	3	2mA	40	Schottky Barrier

SCRs

TYPE	CASE	VDRM	IT (R.M.S.) (A)	IFSM (A)	IGT (mA)	VGT	PG (AV) (W)	IH (mA)	DV/DT (V/uS)	COMMENTS (25°C)
BT151-500R	TO-220	500	12	100	15 max	1.5 max	0.5	20 max	200	(RGK=100)
BT169B	TO-92A	200	0.8	8	.2 max	0.8 max	0.1	5 max	25	(RGK=1k)
C103B	TO-92	200	0.8	8	.2 max	0.8 max	0.01	5 max	20	(RGK=1k)
C106Y	TO-202	30	4	20	.2 max	0.8 max	0.1	5 max	8	(RGK=1k)
C106D	TO-126/TO-202	400	4	20	.2 max	0.8 max	0.1	3 max	8	(RGK=1k)
C122D	TO-220	400	8	82	25 max	1.5 max	0.5	3 max	50	(Gate o/c)
C122E	TO-220	500	8	82	25 max	1.5 max	0.5	30 max	50 typ	(Gate o/c)
C203B	TO-92A	200	0.8	8	.2 max	0.8 max	0.01	5 max	20 typ	
C220D	TO-48	400	10	82	25 max	1.5 max	0.5	30 max	50 typ	
PO103AA	TO-92A	100	0.8		.02-.2	0.8 max	0.1	5 max	100 typ	
PO103AB	TO-92	100	0.8		.02-.2	0.8 max	0.1	5 max	100 typ	
S4008	TO-220	400	8	85	25 max	1.5 max	0.5	30 max	50 typ	(Gate o/c)
S6008L	TO-220	600	8	85	25 max	1.5 max	0.5	30 max	50 typ	(Gate o/c)
SPS420	TO-48	400	20	200	25 max	2.0 max	0.5	50 max	200	(Gate o/c)
TIC126E	TO-220	500	8		20 max	1.5 max	0.5	40 max	100 typ	(Gate o/c)
TYN608	TO-220	600	8	80	15 max	1.5 max	–	30 max	200 typ	
TYN608G	TO-220	600	8	80	25 max	1.5 max	–	45 max	500	

Note: *Not all devices in this section are stocked by Dick Smith Electronics.*

ZENER DATA

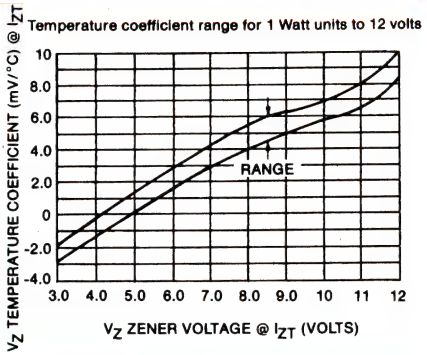
TYPE NO. ▲ 400mW SERIES	TYPE NO. ▼ 1 WATT SERIES	NOMINAL ZENER VOLT. VZ@IZT (V)	TEST CURRENT IZT (mA) 400mW	1W
1N746	1N4728	3.3	20	
1N747	1N4729	3.6	20	
1N748	1N4730	3.9	20	
1N750	1N4732	4.7	20	53
1N751	1N4733	5.1	20	49
1N752	1N4734	5.6	20	45
1N753	1N4735	6.2	20	41
1N754, 1N957	1N4736	6.8	18.5	37
1N755, 1N958	1N4737	7.5	16.5	34
1N756, 1N959	1N4738	8.2	15	31
1N757, 1N960	1N4739	9.1	14	28
1N758, 1N961	1N4740	10	14	25

▲ (DC Power Dissipation: 400 milliwatts @ 50°C Ambient)
(Derate 3.2mW/°C above 50°C)

TYPE NO. ▲ 400mW SERIES	TYPE NO. ▼ 1 WATT SERIES	NOMINAL ZENER VOLT VZ@IZT (V)	TEST CURRENT IZT (mA) 400mW	1W
1N962	1N4741	11	12.5	23
1N759, 1N963	1N4742	12	11.5	21
1N964	1N4743	13	10.5	19
1N965	1N4744	15	9.5	17
1N966	1N4745	16	8.5	15.5
1N967, 1N4112	1N4746	18	7.8	14
1N968	1N4747	20	7	12.5
1N969	1N4748	22	6.2	11.5
1N970	1N4749	24	5.6	10.5
1N971	1N4750	27	5.3	9.5
1N972	1N4751	30	5.3	8.5
1N973	1N4752	33	5.2	7.5

▼ (DC Power Dissipation: 1 Watt @ 50°C Ambient)
(Derate 6.67mW/°C above 50°C)

This range will dissipate up to 3W @ 75°C with 10mm lead length as heatsink.

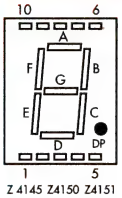


DISCRETE OPTOELECTRONICS

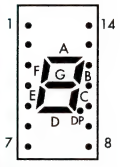
7-SEGMENT LEDs

	LTS312AR Z 4117	LTS313AR Z 4103	LTS5303AR Z 4150	LTS5503AE Z 4151	LTS546AR Z 4145	LTS313AG Z 4105	30240A Z 4118
Characteristics							
Common Terminal Pol.	Anode	Cathode	Cathode	Cathode	Anode	Cathode	Anode
Digit Size	7.6mm	7.6mm	14.2mm	14.2mm	13.2mm	7.6mm	7.6mm
Colour	Red	Red	Red	Orange	Red	Green	Red
Av. Fwd. Seg. Current	25mA	25mA	25mA	25mA	25mA	25mA	25mA
Segment Voltage	1.7	1.7	1.7	2.1	1.7	2.1	2.0
Min. Rev. Brkdn. Volt.	5	5	5	5	5	5	5
Max. Rev. Current	100uA	100uA	100uA	100uA	100uA	100uA	100uA
Seg. Intensity (typ.)	450ucd	450ucd	500ucd	2200ucd	500ucd	2000ucd	750ucd
Max. Seg. Dissipation	55mW	55mW	55mW	75mW	55mW	75mW	85mW
Connections							
Seg. A	1	10	7	7	7	10	1
Seg. B	13	9	6	6	6	9	13
Seg. C	10	8	4	4	4	8	10
Seg. D	8	5	2	2	2	5	8
Seg. E	7	4	1	1	1	4	7
Seg. F	2	2	9	9	9	2	2
Seg. G	11	3	10	10	10	3	11
Dec. Pt.	9	7	5	5	5	7	6, 9
Common	3, 14	1, 6	3, 8	3, 8	3, 8	1, 6	3, 14

Note: Not all devices in this section are stocked by Dick Smith Electronics.



Z 4145 Z4150 Z4151



Z4103 Z4105 Z4117 Z4118

4½ DIGIT LIQUID CRYSTAL DISPLAY

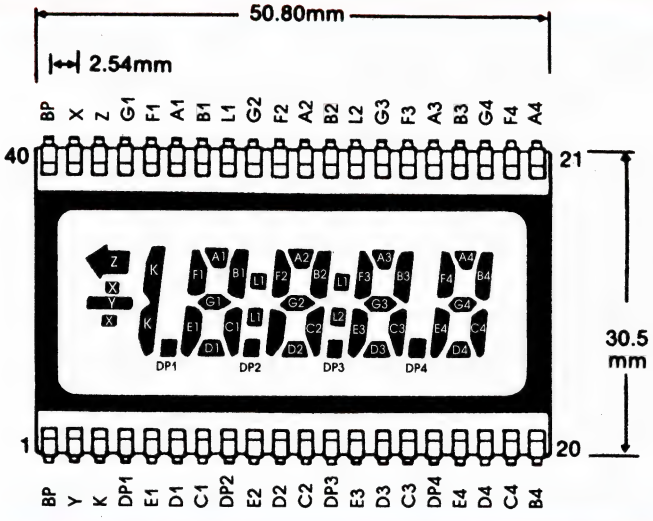
The Z 4175 is a static (direct drive) 4½ digit LCD display featuring 10mm high digits, two colons, four decimal points, plus/minus indicator and an 'arrow'. The display is fitted with DIL pins for direct insertion into a PCB or socket.

This 4½ digit display can be used as a replacement for most 3½ digit displays. The digit pinouts and sign functions are identical except for the '1' which will display in the fifth digit position instead of the fourth.

Care must be taken with LCDs to avoid damage to the glass through excessive mechanical or thermal stress. IC's such as the 7106 A/D converter are ideal for use with the Z 4175 as they provide the required drive voltages and conditions. If discrete circuitry is used to drive the display, it must ensure that the D.C. component of the drive is less than 50mV. The application of a D.C. voltage will cause damage. Normally, the 'common' or 'backplane' terminal is driven by a square wave within the specified frequency and voltage range. Those segments which are 'off' are then fed with a signal in-phase with that driving the backplane, while those segments which are intended to be 'on' are driven by a signal 180° out of phase with the backplane signal.

Specifications

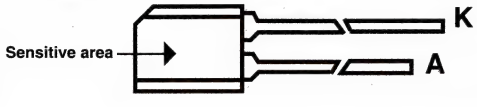
Operating Voltage:	3.0V
Maximum Allowable DC:	50mV
Operating Frequency Range:	30 to 300Hz
Contrast Ratio:	20:1
DIL Pin Spacing:	2.54mm
DIL Pin Length:	6.35mm
Storage Temperature:	–20°C to +60°C
Operating Temperature:	–10°C to +60°C



Z 1956 SILICON P-I-N INFRA RED PHOTO DIODE

Silicon pin photo diode encapsulated in a black plastic package which acts as an infra-red filter.

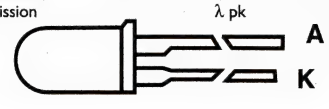
Reverse Voltage	Vr max	30V
Power Dissipation @ 25°C	Ptot	150mW
Junction Temperature	Tj	100°C
Dark Reverse Current (Vr=10V Ee=0)	Idr	30nA
Light Reverse Current (Ee=1mW/cm²)	Ilr	50uA
Wavelength of Peak Response	λ pk	950nm



Z 3235 GaAs INFRA RED EMITTING DIODE

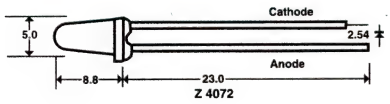
High Intensity Gallium Arsenide infra-red emitting diodes intended for remote control applications. Smoke coloured end looking encapsulation.

Forward Voltage	Vf	1.2V @20mA
Continuous Reverse Voltage	Vr	5V
Forward Current (d.c.)	If max	50mA
Peak Forward current (300pps, 1us pulse)	Ifpk	3A
Total Power Dissipation up to Tamb=25°C	Ptot max	100mW
Junction Temperature	Tj	100°C
Radiant incidence @ If=20mA	Eo	1mW/cm²
Wavelength of Peak Emission	λ pk	940nm

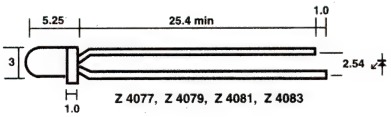


HIGH PERFORMANCE LEDs

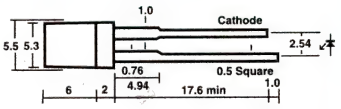
Type		Nominal Size (mm)	Lens	Fwd. Voltage (@20mA)	Max. Cont. Fwd. Current (mA)	Max. Rev. Voltage	Luminous Intensity (mcd)	@ current (mA)	Peak Wavelength (nm)
Z 4190	Red	2 dia.	Red Diffused	2.0	30	5	1.3	10	635
Z 4192	Green	2 dia.	Green Diffused	2.1	30	5	1.3	10	569
Z 4001	White	3 dia.	Water Clear	3.6	30	5	600	20	–
Z 4077	Red	3 dia.	Red Diffused	2.1	15	5	2	10	697
Z 4079	Green	3 dia.	Green Diffused	2.2	30	5	6	10	565
Z 4081	Yellow	3 dia.	Yellow Diffused	2.2	20	5	5	10	585
Z 4083	Orange	3 dia.	Orange Diffused	2.0	30	5	5	10	635
Z 4194	Red	3 dia.	Red Diffused	2.0	30	5	1.7	10	635
Z 4196	Green	3 dia.	Green Diffused	2.1	30	5	1.7	10	565
Z 4006	Blue	5 dia.	Water Clear	3.6	30	5	650	20	470
Z 3900	Blue	5 dia.	Water Clear	3.8	30	5	1000	20	430
Z 4008	Green	5 dia.	Water Clear	3.5	30	5	2200	20	525
Z 4009	Yellow	5 dia.	Water Clear	2.1	30	5	5000	20	590
Z 4011	Green	5 dia.	Water Clear	3.5	30	5	6000	20	525
Z 4071	Red/Green	5 dia.	White Diffused	2.0	25	5	126/49	20	660/567
Z 4072	Red	5 dia.	Water Clear	1.8	40	4	1000	20	660
Z 4074	Red	5 dia.	Water Clear	1.8	40	4	2300	20	660
Z 4031	Sunset Red	5 dia.	Water Clear	2.0	50	5	8000	20	640
Z 4085	Red	5 dia.	Red Diffused	2.1	15	5	3	10	697
Z 4087	Green	5 dia.	Green Diffused	2.2	30	5	10	10	565
Z 4089	Yellow	5 dia.	Yellow Diffused	2.2	20	5	8	10	585
Z 4091	Orange	5 dia.	Orange Diffused	2.0	30	5	10	10	635
Z 4060	Red	10 dia.	Red Diffused	2.0	30	5	40	20	625
Z 4061	Green	10 dia.	Green Diffused	2.2	25	5	40	20	565
Z 4062	Yellow	10 dia.	Yellow Diffused	2.1	30	5	40	20	590
Z 4066	Red	10 dia.	Water Clear	1.85	30	5	3000	20	660
Z 4067	Red	10 dia.	Water Clear	1.9	50	5	6000	20	660
Z 4093	Red	1.8 x 5.5	Red Diffused	2.1	15	5	0.4	10	697
Z 4095	Green	1.8 x 5.5	Green Diffused	2.2	30	5	1	10	565
Z 4097	Yellow	1.8 x 5.5	Yellow Diffused	2.2	20	5	0.8	10	585

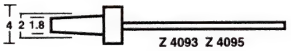


Z 4072

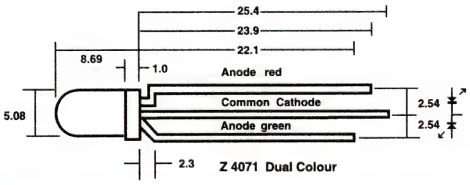


Z 4077, Z 4079, Z 4081, Z 4083

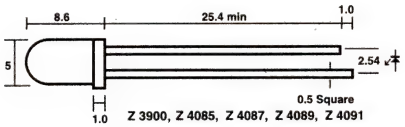




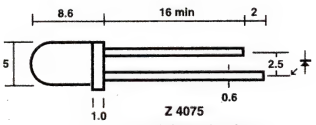
Z 4093 Z 4095



Z 4071 Dual Colour



Z 3900, Z 4085, Z 4087, Z 4089, Z 4091



Z 4075
*Extra bright, clear lens

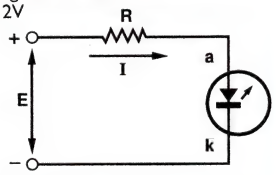
FLASHING LEDs

	Z 4040 RED	Z 4042 GREEN	UNITS
Nominal Size	5	5	mm
Operating Voltage Range	3-10	3-10	V
Intensity (typ. @ 10V)	36	10	mcd
Peak Wavelength	660	565	nm
Flash Rate (approx @ 10V)	2	2	Hz
Duty Cycle	25	25	%
Max. Rev. Voltage	0.6	0.6	V

USING LEDs

When using a Light Emitting Diode (LED) as an indicator, use the following formula to determine series resistance for various voltages: R = (E-Vf) x 1000/I, where R is the resistance in ohms, E is the DC supply voltage, I is the LED current in mA and Vf is the forward voltage drop of the LED, typ. 2V

ie. With Vf=2V, LED current=20mA,
for 6V, R=220 ohms
9V, R=330 ohms
12V, R=560 ohms
24V, R=1200 ohms



Note: This does not apply to flashing LEDs. Flashing LEDs can be driven from a voltage source, ie without a resistor.

Z 4801 LIGHT DEPENDENT RESISTOR (LDR)

Ratings		Characteristics	
Max. Voltage	100V	Dark Resistance	> 10 Mohm
Power Dissipation (at 25°C)	50mW	Resistance @ 10 Lux	48-140k ohm
		Peak Spectral Response	560-620 nm

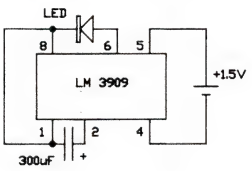
The approximate relationship between illumination and resistance is given by,

$$R = AL^{-0.85}$$

where; R = resistance, A = a constant (approx. 340-991 x 10^3), L = light level in Lux

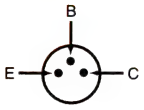
LM 3909 LED FLASHER/OSCILLATOR

The LM 3909 is designed to flash LEDs from a low voltage supply with small current drain. By using the timing capacitor for voltage boost, it delivers pulses of 2V or more to the LED while operating on a supply of 1.5V or less. The circuit shown here, powered from an AA cell, should flash an LED continuously for several months.

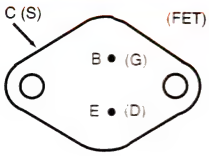


SEMICONDUCTOR OUTLINES

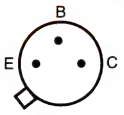
BOTTOM VIEW UNLESS OTHERWISE STATED



TO-1

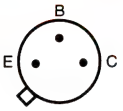


TO-3

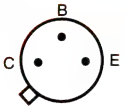


TO-5

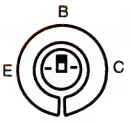
TO-18



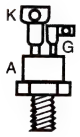
TO-39



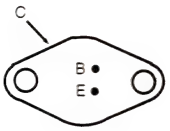
79-03
TO-39(A)



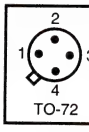
TO-39(mod)



TO-48 SCR
SIDE VIEW



TO-66



TO-72

PIN	T(25)	T(28)	FET N(25)
1	E	B	S
2	B	E	D
3	C	C	G
4	CASE	CASE	CASE

TO-72 (2)

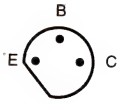
TO-72

TO-92

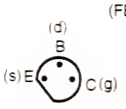
PIN	71	72 (std.)	74	76	77
1	C	C	B	E	E
2	E	B	C	C	B
3	B	E	E	B	C
1	G	G	S	D	D
2	D	S	G	G	S
3	S	D	D	S	G

TO-92 VAR.1 TO-92 VAR.2 TO-92 SCR TO-92 A SCR

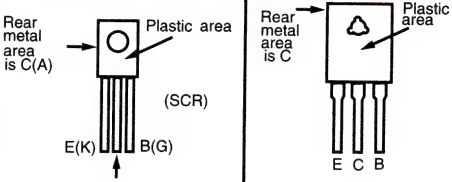
TO-92 SERIES



TO-105

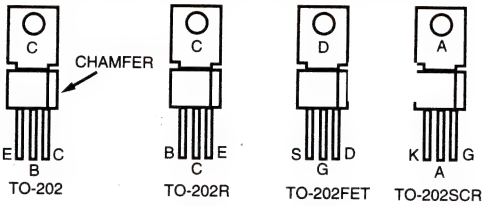


TO-106



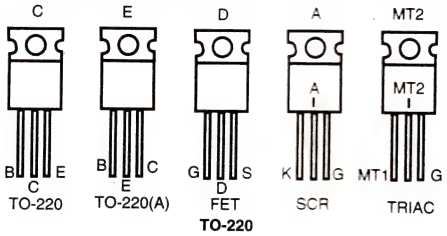
TO-126

90 - 05
TO-127
FRONT VIEW



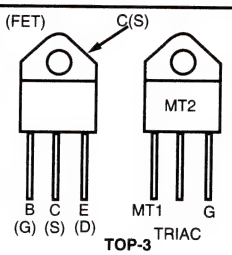
TO-202 TO-202R TO-202FET TO-202SCR

TO-202

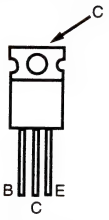


TO-220 TO-220(A) FET TO-220 SCR TRIAC

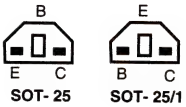
FRONT VIEW



TOP-3
TRIAC
FRONT VIEW

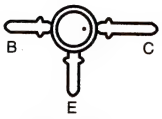


TOP-66
FRONT VIEW

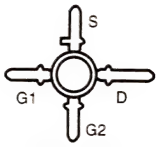


SOT- 25 SOT- 25/1

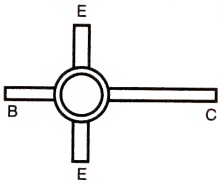
SOT-30



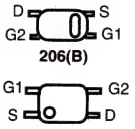
SOT-37 (2)
TOP VIEW



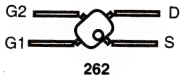
SOT-103
TOP VIEW



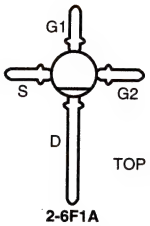
MX
TOP VIEW



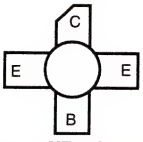
206(B)
206
TOP VIEW



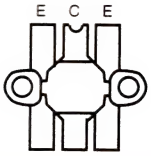
262
TOP VIEW



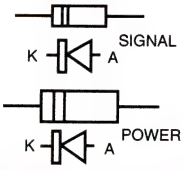
TOP VIEW
2-6F1A



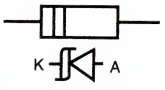
MT-72C
TOP VIEW



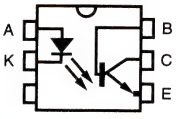
TOP VIEW T-40



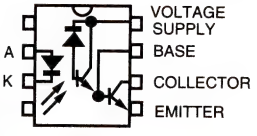
DIODES



ZENER DIODES



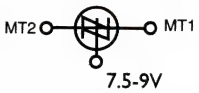
D6
TOP VIEW



D8
TOP VIEW

TRIGGER DEVICES

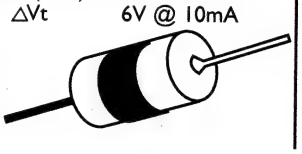
2N4992/MBS4992 Silicon Bidirectional Switch



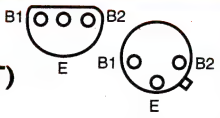
V_S	7.5-9V
I_S	120uA (max)
I_H	0.5mA (max)
V_F	1.7V (max)
I_B	10uA (max)
I_{GF}	100uA (max)

BR – 100 – 03 DIAC

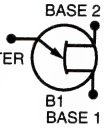
Vs	28 – 36V
$V_{SYM/VRRM}$	3V
Is (max)	100uA
ΔVt	6V @ 10mA



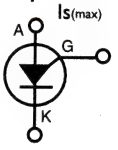
2N2646 Unijunction Transistor (UJT)



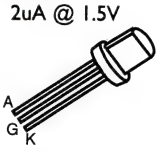
P_{TOT}	300mW
$V_{B2.E}$	30V
V_{B-B1}	35V
R_{IB-BIO}	9k ohms (max)
$V_{B1\ (PK)}$	3V
$I_{E(PK)}$	5uA
n =	0.56-0.75
$I_{(VAL)}$	4mA min



2N6027/D13T1 Programmable Unijunction Transistor

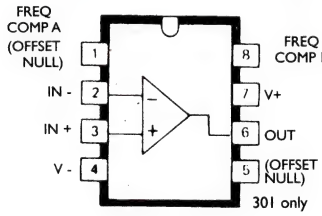


V_{A-K}	40V (max)
I_T	2A (max)
$I_{(VAL)}$	50uA
$I_{S(max)}$	2uA @ 1.5V

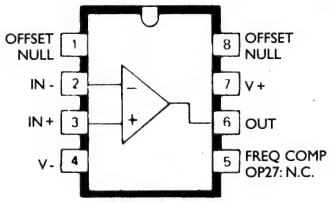


TYPE	DEVICE	INPUT OFFSET VOLT. MAX (mV)	INPUT OFFSET CURRENT MAX (nA)	INPUT BIAS CURRENT MAX (nA)	VOLT. GAIN MIN (VOLTS/V)	UNITY GAIN B.W.TYP (MHz)	SLEW RATE AV=1 TYP (V/US)	OUTPUT VOLT. SWING R1=10K (VS=+/-15) (V)	SUPPLY VOLTAGE MIN (V)	SUPPLY VOLTAGE MAX (V)	CMRR MIN (dB)	DIFFERENTIAL INPUT VOLT. (V)	SUPPLY CURRENT TA=25C (NOTE 1) MAX (mA)	INTERNAL FREQ. COMP.
	Single Op Amps													
LM301	GP Amplifier	10	70	300	15k	1	0.5	+/-12	+/-3	+/-18	70	+/-30	3	No
LM741	GP Amplifier	7.5	300	800	15k	1	0.5	+/-12	+/-3	+/-18	70	+/-30	2.8	Yes
LM308	Low Input Current	10	1.5	10	15k	1	0.3	+/-13	+/-2	+/-18	80	+/-1.0(Note 2)	0.8	No
NE5534	Low Noise	5	400	2000	15k	10	6	+/-12	+/-3	+/-22	70	+/-0.5(Note 2)	8	No
OP27	Lo Noise Precision	0.22	135	150	450k	5	1.7	+/-11	+/-4	+/-22	96	+/-0.7(Note 2)	5.7	Yes
TL071	JFET Lo Noise	13	2	7	15k	3	13	+/-12	+/-3.6	+/-18	70	+/-30	2.5	Yes
LF351	JFET Lo Noise	13	4	8	15k	4	13	+/-12	+/-4	+/-18	70	+/-30	3.4	Yes
TLC251	Prog Lo Power CMOS	10	0.3	0.6	7.5k	0.7	0.6	7.8(Vs=10V)	1.4	18	60	+/-18	0.22	Yes
CA3130	MOSFET Input	15	0.03	0.05	50k	4	10	+/-6(Vs=+/-8)	+/-2.5	+/-8	70	+/-8	15	No
CA3140	MOSFET Input	15	0.03	0.05	20k	4.5	9	+/-12	+/-2	+/-18	70	+/-8	6	Yes
LM10C	Inc.Voltage Ref.	5	3	40	15k	0.1	*	+/-14.6	1.1	45	87	+/-40	0.27	Yes
LM3080	Transconductance	5	500	5000	5.4 mmho	2@Ao1	50	+/-12	+/-2	+/-18	80	+/-5	typ 1.1	No
LM627	Precision op-amp	0.1	25	25	4M	14	4.5	+/-14.0	+/-3.5	+/-18	120	25mA(Note 2)	4.8	Yes
	Dual Op Amps													
LM1458	GP Amplifier	7.5	300	800	15k	1	0.5	+/-12	+/-3	+/-18	70	+/-30	5.6	Yes
LM358	Low Power	9	150	500	15k	1	0.5	+/-12	+/1.5	+/-16	65	32	2	Yes
LM833	Hi-Fi	5	200	1000	30k	15	7	+/-12	+/-5	+/-18	80	+/-30	8	Yes
TL072	JFET Lo Noise	13	2	7	15k	3	13	+/-12	+/-3.6	+/-18	70	+/-30	5	Yes
LF353	JFET Lo Noise	13	4	8	15k	4	13	+/-12	+/-6	+/-18	70	+/-30	6.5	Yes
LM13600	Transconductance	4	600	8000	5.4mmho	2@Ao1	50	+/-12	+/-2	+/-18	80	+/-5	typ 2.6	No
	Quad Op Amps													
LM324	GP Amplifier	9	150	500	15k	1	0.5	+/-13	+/-1.5	+/-16	65	32	3	Yes
UA4136	GP Low Noise	7.5	300	800	15k	3	1	+/-12	+/-2	+/-18	70	+/-30	11	Yes
TL074	JFET Lo Noise	13	2	7	15k	3	13	+/-12	+/-3.6	+/-18	70	+/-30	10	Yes
LF347	JFET Lo Noise	13	4	8	15k	4	13	+/-12	+/-4.5	+/-18	70	+/-30	11	Yes
LM614	Inc.Volt Ref.	7	50	250	25k	>1	0.8	12.4	+3	+36	80	36	typ 0.8	Yes
LM3900	Norton Amp	*	*	200	1.2k	2.5	20	10	+4	+32	*	*	10	Yes

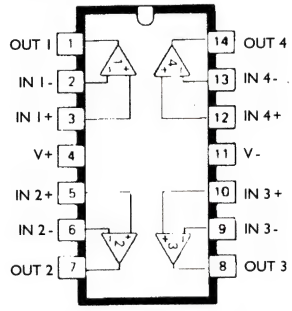
** Not Specified, Note 1: Supply current for all channels in the package, Note 2: Inputs have shunt diode protection, current must be limited, Note 3: Dick Smith Electronics may not stock all devices shown.*



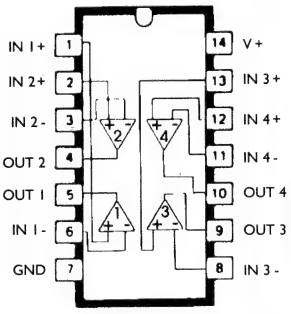
301,308



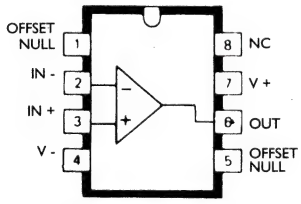
LM627, OP27



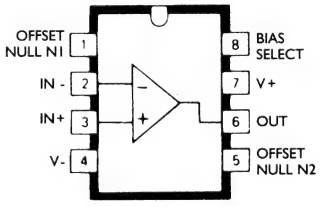
LM324, TL-074, LF347



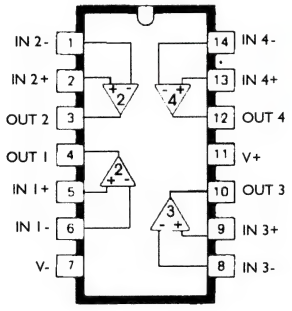
LM 3900



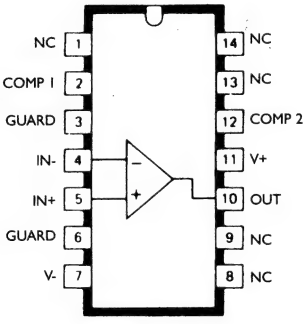
741, TL-071, LF351, AD711



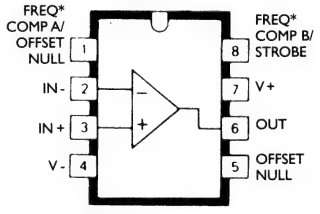
TLC251



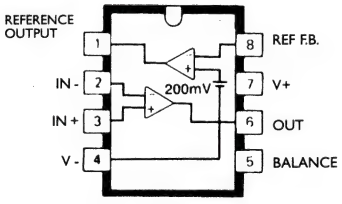
UA4136



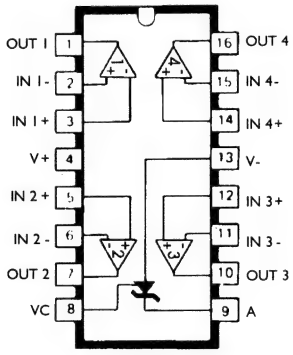
308



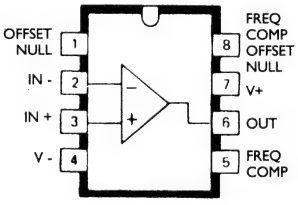
CA-3130, CA-3140
*CA-3130 ONLY



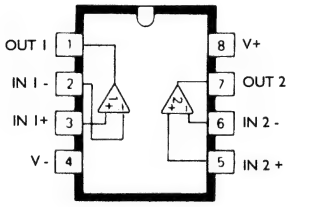
LM-10



LM 614

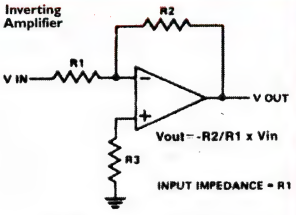


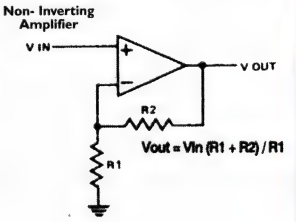
NE5534

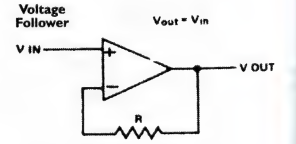


TL-072, LF-353, LM-833, 1458, AD712, LM358

AMPLIFIER CONFIGURATIONS







VOLTAGE REGULATORS

Three Terminal Voltage Regulators

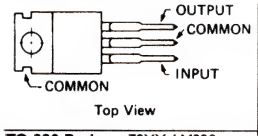
These voltage regulators almost make power supply building unnecessary since they require only a filtered DC voltage input. They are essentially indestructible (if used within manufacturer's specs) because of internal current limiting and thermal shutdown should a short occur. They are ideally suited to local, on-board regulation simplifying power supply distribution systems. Excellent for TTL and project supplies. With the advent of microprocessors and microcomputers, these regulators have been used extensively in power supplies for such systems. This type of use typifies their versatility and reliability. Another area of supply regulation use is with analogue operational amplifiers. These circuits usually call for both + and – complementary rail voltages. These three terminal devices ideally suit such requirements.

The addition of protection diodes, as shown in the 317/350 application circuit, is recommended if there is any possibility of the regulator input or output being shorted to ground. These may also be necessary if significant (1uF) capacitance is connected between ground and either the common or output terminals of the regulator.

TYPE	POL	CASE	VIN MAX	VOUT MIN	VOUT TYP	VOUT MAX	IOUT (NOM) A.	DROP-OUT VOLT.
78L05Z	pos.	TO-92	30	4.8	5	5.2	0.1	2.2
78L12Z	pos.	TO-92	30	11.5	12	12.5	0.1	2.2
78L15Z	pos.	TO-92	35	14.4	15	15.6	0.1	2.2
7805T	pos.	TO-220	35	4.8	5	5.2	1	2.5
7808T	pos.	TO-220	35	7.7	8	8.3	1	2.5
7812T	pos.	TO-220	35	11.5	12	12.5	1	2.5
7815T	pos.	TO-220	35	14.4	15	15.6	1	2.5
7805K	pos.	TO-3	35	4.8	5	5.2	1	2
7812K	pos.	TO-3	35	11.5	12	12.5	1	2
7815K	pos.	TO-3	35	14.4	15	15.6	1	2
7905T	neg.	TO-220	35	-4.8	-5	-5.2	1	2.3
7912T	neg.	TO-220	35	-11.5	-12	-12.5	1	2.3
7915T	neg.	TO-220	35	-14.4	-15	-15.6	1	2.3
7905K	neg.	TO-3	35	-4.8	-5	-5.2	1	2.3
LM317T	pos.	TO-220	40	adj. 1.2 to 37			1.5	3
LM317K	pos.	TO-3	40	adj. 1.2 to 37			1.5	3
LM350T	pos.	TO-220	35	adj. 1.2 to 33			3	3
LM350K	pos.	TO-3	35	adj. 1.2 to 33			3	3
LM337T	neg.	TO-220	40	adj. -1.2 to -37			1.5	3
LM-2940CT-5	pos.	TO-220	26	<6.25	5	5.25	1	<1
LM-2940T-8	pos.	TO-220	26	<9.4	8	8.4	1	<1
LM-2940T-10	pos.	TO-220	26	<11.5	10	10.5	1	<1
LM-2940CT-12	pos.	TO-220	26	<13.6	12	12.6	1	<1
LM-2941CT	pos.	TO-220	45	adj. 5 to 20			1	<1

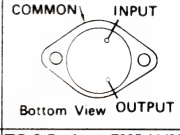
For all devices listed, the maximum junction temperature is 125°C. Except for TO-92 packages, maximum junction to case thermal resistance is 4°/watt. For TO-92 packages, junction to ambient thermal resistance is 230°/w.

TO-220 Package
78XX, LM340, LM2940
Positive Regulator Series



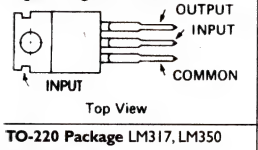
Top View

TO-3 Package
78XX, LM340
Positive Regulator Series



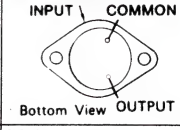
Bottom View

TO-220 Package 79XX, LM320
Negative Regulator Series



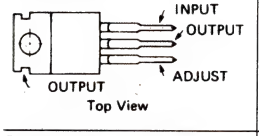
Top View

TO-3 Package 7905, LM320
Negative Regulator Series



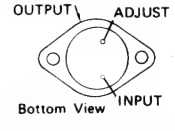
Bottom View

TO-220 Package LM317, LM350
Positive Regulator



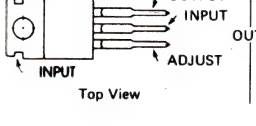
Top View

TO-3 Package
LM317, LM350



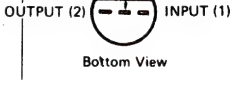
Bottom View

TO-220 Package LM337
Negative Regulator



Top View

TO-92 Package 78LXX
Positive Regulator Series

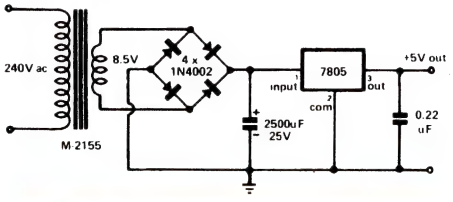


Bottom View

TYPICAL POWER SUPPLY

Output: 5V @ 1A

The same basic circuit can be used with other regulators of different voltages, only the input ac voltage has to be changed to accommodate the requirement of the regulator, e.g. If an output of 12V was the requirement, a 7812 IC could be used with an ac input voltage of 15V.

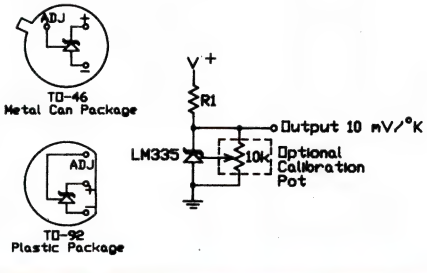


LM335 PRECISION TEMPERATURE SENSOR

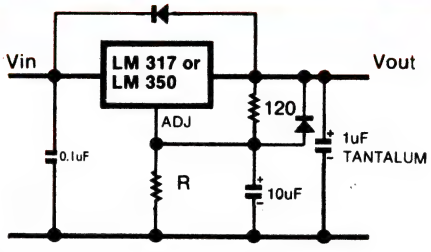
The LM335 operates as a two terminal zener having a breakdown voltage directly proportional to absolute temperature (10mV per degree Kelvin).

An adjustment terminal is provided, and maximum accuracy is realised when this is used to set the output voltage to 2.982V @ 25°C.

Max. Rev. Current	15mA
Continuous operating temp.	-40°C to 100°C
Operating output Voltage (Tc = 25°C, I = 1mA) typ	2.98V
Max. Uncalibrated Temp. error (Tc = 25°C, I = 1mA)	6°C
Output Voltage Tempco.	10mV/°C
Dynamic Impedance	0.6 Ohms
Non-Linearity (I = 1mA)	1.5°C



LM317 OR LM350 SERIES



1. Choose Resistor R as follows:
   R = (96 x Vout) – 120
   Where R is in ohms and Vout is in volts.
2. Vin should be at least 2.5 volts greater than Vout.
3. Capacitor voltage ratings must be chosen appropriately.
4. The protection diodes shown will be necessary if the input or output of the regulator is shorted to ground. 1 amp types should be adequate.

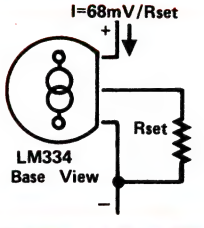
LM334 ADJUSTABLE CURRENT SOURCE

Operating Voltage
1-30

Max Power Dissipation
200mW

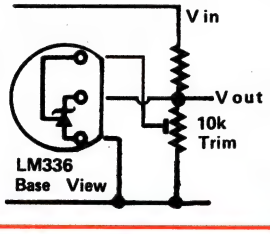
Voltage Sensitivity
0.1%/V

Temperature Sensitivity
+0.33%/°C



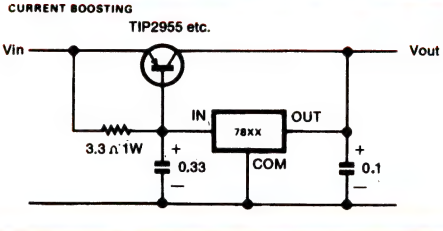
LM336 REFERENCE DIODES

	LM336-2.5	LM336-5.0
Max Fwd Current (mA)	10	10
Untrimmed Ref Voltage	2.44-2.54	4.9-5.1
Dynamic Impedance (ohms)	1	2
Temp Stability (0-70°C)	20ppm	20ppm



INCREASING THE OUTPUT CURRENT OF THE REGULATOR

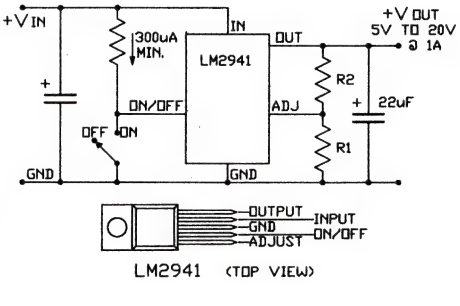
By adding a PNP power transistor to a positive regulator, the output current can be increased above the normal rating of the regulator itself. The circuit shown below can be expected to deliver in excess of 4A with the pass transistor mounted on a heatsink. The same conditions can also be implemented with a negative regulator, the difference being the polarities of components, the pass transistor in this case would be an NPN type such as a 2N3055.



LM2941 VARIABLE LOW DROP-OUT REGULATOR

Here is the basic application circuit for the LM2941 Variable Low Dropout Voltage Regulator:

1. If the on/off switch is not required, then the pull-up resistor can be omitted and the ON/OFF pin is tied to ground.
2. If the on/off switch is used, then a minimum of 300uA should flow in the pull-up resistor when the switch is open. To establish this resistor value assume 2V at the ON/OFF pin.
3. The capacitor on the output must not be less than 22uF, and positioned as close to the LM2941 as possible.
4. A 1K resistor is recommended for R1. Do not bypass R1 or R2. The reference voltage (V_{REF}), between the ADJUST pin and ground, is typically 1.275V
5. The equation for VOUT is;
   $V_{OUT} = V_{REF} * (R1 + R2)/R1$
   which for R2 is; $R2 = R1 * (V_{OUT}/V_{REF} - 1)$



555 TIMER (LM/NE555 BIPOLAR, TLC555 CMOS)

General

The 555 Timer is a highly versatile low-cost IC specifically designed for precision timing applications. It can also be used in monostable multi-vibrator, astable multi-vibrator and Schmitt trigger applications.

Bipolar 555

The 555 has many attractive features. It can operate from 4.5V to 16V. Its output can source (supply) or sink (absorb) load current up to a maximum of 200mA and so can directly drive loads such as relays, LEDs, low-power lamps, and high impedance speakers. When used in the 'timing' mode, the IC can readily produce accurately timing periods variable from a few microseconds to several hundred seconds via a single R-C network. Timing periods are virtually independent of supply rail voltage, have a temperature coefficient of only .005% per °C, can be started via a TRIGGER command signal, and can be aborted by a RESET command signal.

When used in the monostable mode, the IC produces output pulses with typical rise and fall times of a mere nS.

When used in the astable mode both the frequency and the duty cycle of the waveform can be accurately controlled with two external resistors and one capacitor.

CMOS 555

Due to its high impedance inputs (typically 1012Ω), it is capable of producing accurate time delays and oscillations while using less expensive, smaller timing capacitors than NE555. Like the NE555, the TLC555 achieves both monostable (using one resistor and one capacitor) and astable (using two resistors and one capacitor) operation. In addition, 50% duty cycle astable operation is possible using only a single resistor and one capacitor. The TLC555 will operate at frequencies up to 2MHz and is fully compatible with CMOS, TTL, and MOS logic.

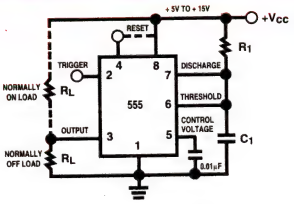
While the complementary CMOS output is capable of sinking over 100mA and sourcing over 10mA, the TLC555 exhibits greatly reduced supply current spikes during output transitions. This minimises the need for the large decoupling capacitors required by the NE555.

Specifications

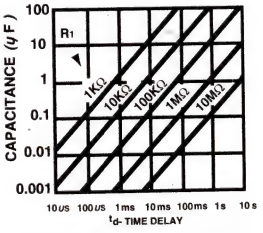
VCC = 15V UNLESS OTHERWISE STATED TA = 25°C PARAMETERS	CONDITIONS	LM/NE555C LIMITS MIN	TYP	MAX	CONDITIONS	TLC555C LIMITS MIN	TYP	MAX
Supply Voltage		4.5		16V		2		18
Supply Current	(RL = ∞, Vop = low)		10mA	15mA	(RL=∞, Vop=low)		360uA	
Power Dissipation 600mW				600mW				
Threshold Voltage	(% of Vcc)		67%		(%of Vcc)		67%	
Threshold Current			0.1	0.25uA	(Vcc=5V)		10pA	
Trigger Voltage	(% of Vcc)		33%		(% of Vcc)		33%	
Trigger Current			0.5uA		(Vcc=5V)		10pA	
Reset Voltage		0.4	0.5	1V		0.4	1.1	1.5
Reset Current			0.1	0.4mA	(Vcc=5V)		10pA	
High Level Output	(Iol=100mA)	12.75	13.3V		(Iol=10mA)	12.5V	14.2V	
Low Level Output	(Iol=100mA)		2	2.5V	(Iol=100mA)		1.28V	3.2V
Output Current	Sink			200mA			100mA	
	Source			200mA			10mA	
Initial Error of Timing Interval			1%				1%	

Function Table

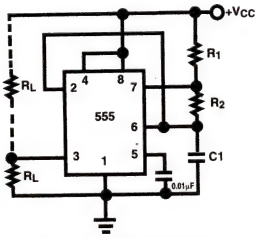
RESET	TRIGGER VOLTAGE	THRESHOLD VOLTAGE	OUTPUT	DISCHARGE SWITCH
Low	Irrelevant	Irrelevant	Low	On
High	<1/3 Vcc	Irrelevant	High	Off
High	>1/3 Vcc	>2/3 Vcc	Low	On
High	>1/3 Vcc	<2/3 Vcc	As previously established	



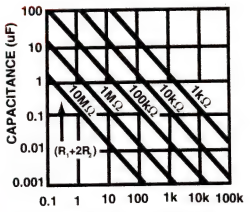
Basic Monostable Circuit



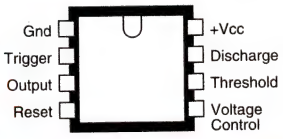
Time Delay vs R1 and C1



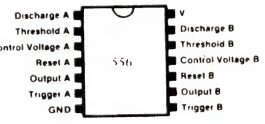
Basic Astable Circuit



Free Running Frequency



555 Pin Connections



556 Pin Connections

Monostable Operation

In the monostable mode, the timer functions as a one-shot. Referring to circuit the external capacitor is initially held discharged by a transistor inside the timer.

When a negative trigger pulse is applied to lead 2, the flip-flop is set, releasing the short circuit across the external capacitor and drives the output HIGH. The voltage across the capacitor, increases exponentially with the time constant t=R1C1. When the voltage across the capacitor equals 2/3 VCC, the comparator resets the flip-flop which then discharges the capacitor rapidly and drives the output to its LOW state.

The circuit triggers on a negative-going input signal when the level reaches 1/3 VCC. Once triggered, the circuit remains in this state until the set time has elapsed, even if it is triggered again during this interval. The duration of the output HIGH state is given by t=1.1 R1C1. The timing interval is independent of supply. When Reset is not used it should be tied high to avoid any possibility of false triggering.

Astable Operation

When the circuit is connected as shown it triggers itself and free runs as a multivibrator. The external capacitor charges through R1 and R2 and discharges through R2 only. Thus the duty cycle may be precisely set by the ratio of these two resistors.

In the astable mode of operation, C1 charges and discharges between 1/3 VCC and 2/3 VCC. As in the triggered mode, the charge and discharge times and therefore frequency are independent of the supply voltage.

The charge time (output HIGH) is given by:

$$t1 = 0.693\ (R1 + R2)\ C1$$

and the discharge time (output LOW) by:

$$t2 = 0.693\ (R2)\ C1$$

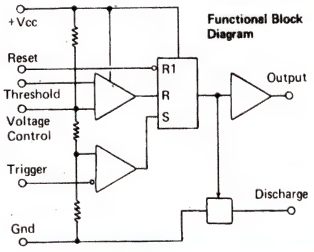
Thus the total period T is given by:

$$T = t1 + t2 = 0.693\ (R1 + 2R2)\ C1$$

The frequency of oscillation is then:

$$f = \frac{1}{T} = \frac{1.44}{(R1 + 2R2)\ C1}$$

The duty cycle is given by: $D = \frac{R2}{R1 + 2R2}$



723 VOLTAGE REGULATOR

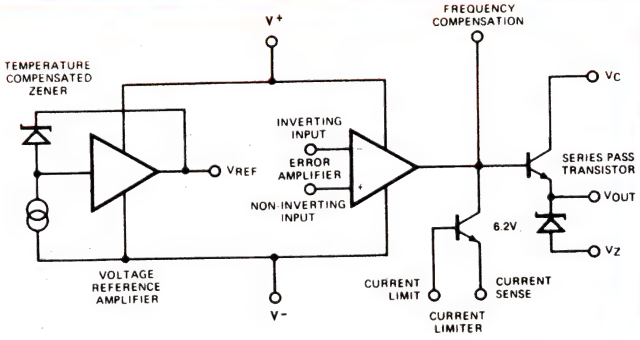
The 723 voltage regulator is a versatile device which is intended for use with positive or negative supplies, as either a series, shunt or switching regulator. It includes a temperature compensated voltage reference, error amplifier, series pass transistor and current limit circuitry.

Output voltage is adjustable between 2 and 37 volts, and the internal transistor can supply up to 150mA. Output current capability can be increased to several amps with an external pass transistor.

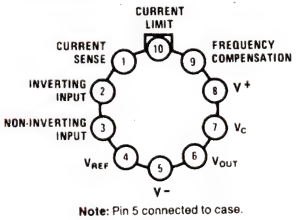
Specifications

ABSOLUTE MAXIMUM RATINGS		
Input Voltage		40V
Diff. Input Voltage (error amp)		+/-5V
Com. Mode Input Voltage (error amp)		8V
Current from ref		15mA
Current from Vz		25mA
Maximum Output Current		150mA
Maximum Dissipation 25°C:	Dip	660mW
	Metal Can	800mW

CHARACTERISTICS				
Input Voltage Range	9.5	–	40	V
Output Voltage Range	2	–	37	V
Reference Voltage	6.8	7.15	7.5	V
Standby Current Drain	–	2.3	4	mA
Current Limit Sense Voltage	–	0.65	–	V
Thermal Resistance J-A: Dip	–	105	–	K/W
Metal Can	–	165	–	K/W



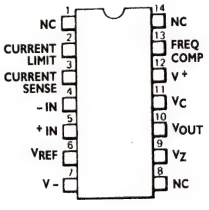
Metal Can Package



Note: Pin 5 connected to case.

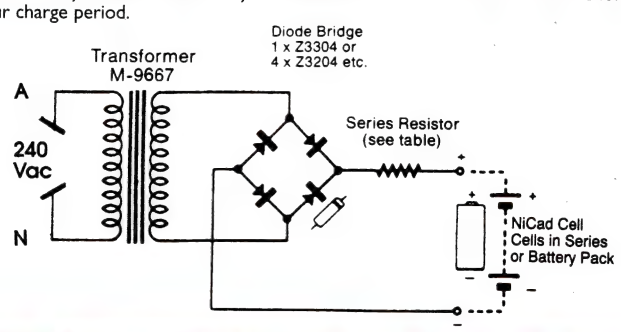
Top View

Dip Package



A SIMPLE NICAD CHARGER

Circuit diagram for a simple constant current charger, the table below gives a guide to the value of the series resistor. The actual value of the correct charging current for the nicad cell is usually marked on the body. The resistor values in the table chosen are for a 14 hour charge period.



TYPICAL APPLICATIONS

Type of Cell			4 Cells 7.5V	6 Cells 10V	8 Cells 12.5V	10 Cells
S3305	500mAH	AA	220/1W	150/1W	120/1W	100/1W
S3312	600mAH	AA	150/1W	120/1W	100/1W	68/1W
S3301	1.2AH	C	82/5W	68/5W	47/5W	33/5W
S3311	2AH	C	47/5W	39/5W	27/5W	22/5W
S3303	1.2AH	D	82/5W	68/5W	57/5W	33/5W
S3310	4AH	D	22/10W	18/5W	12/5W	10/5W
S3308	100mAH '9V' Transistor Battery (x1) 680/0.25W					

The figures in the four columns indicate the value of the series resistor (in ohms), and its power rating (in watts) for the particular cells. These values are intended as a guide, or starting point, but should result in charge current within 10% of the desired target values. The actual value best suited to the cells in use can be determined by inserting a current meter in series with charged cells, while charging, and substituting other resistor values. For most applications, the values shown in the table should be satisfactory.

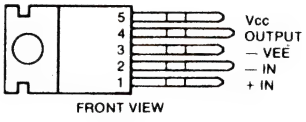
LM1875 20-WATT AMPLIFIER IC

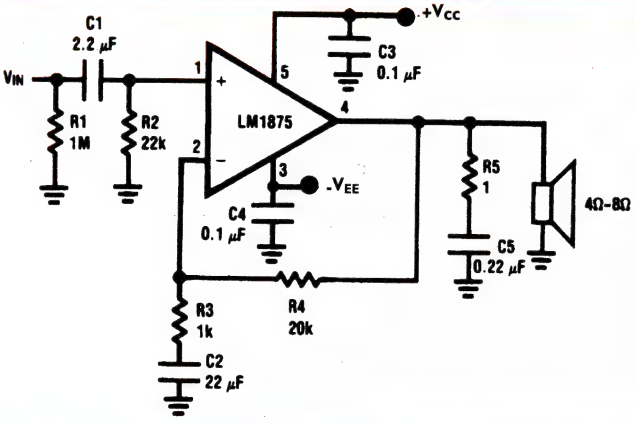
The LM1875 is a monolithic power amplifier IC which takes advantage of advanced techniques to achieve low distortion, even at high output levels. Other features include high gain, fast slew rate and a wide power bandwidth, large output voltage swing, high current capability and wide supply range. The device is internally compensated for gains of 10 and greater.

Specifications

Supply Voltage	+/-30V max.
Supply Current	100mA max.
THD 20W/1KHz	0.015% typ.
Open Loop Gain	90dB typ.
Current Limit	4A typ.
Thermal Resistance (junction to case)	2°C/W typ.
Junction Temperature	150°C max.

TO-220 Power Package (T)





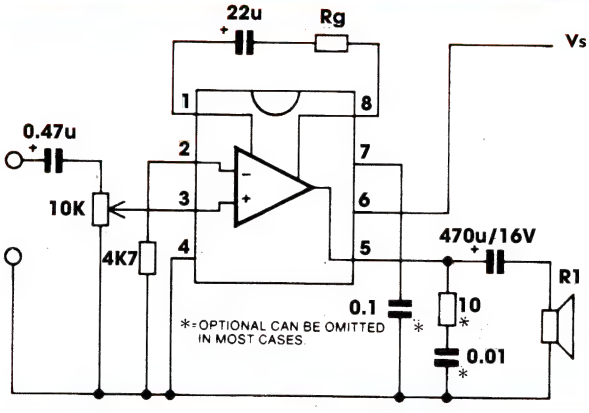
LM386 POWER AMPLIFIER

The LM386 power amplifier IC is ideal for low voltage applications. The gain is internally set at 20, but may be increased up to 200 by adding components between pins 1 and 8.

GAIN	RG
20	∞
50	680
100	180
200	0

OUTPUT POWER (mW)

VS (VOLTS)	RI (OHMS) 4	8	16
12	380	660	780
9	380	560	400
6	250	250	150
5	190	160	90



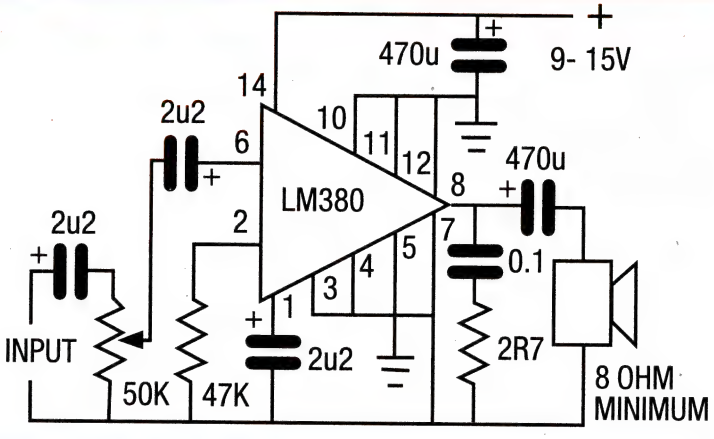
LM380 2.5-WATT AMPLIFIER IC

The LM380 is an amplifier IC for general purpose audio applications such as intercoms, small audio amplifiers, headphone amplifiers, TV and radio sound. The output is short-circuit proof and the device has internal thermal limiting. It is also suitable for low power DC operation such as for controlling a small motor or servo control.

The gain is internally set at 34dB, a voltage gain of 50.

Specifications

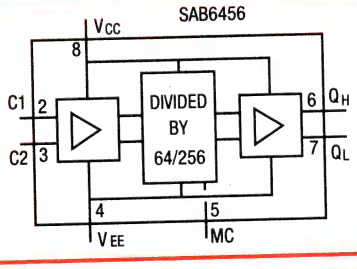
Supply Voltage	10-22 Volts
Gain	34dB
Output Power (into 8 ohms, @ 3% THD)	2.5 Watt (min.)
Peak Current	1.3 Amps
Input Resistance	150k ohms
Bandwidth	100kHz
THD	<0.2%
Quiescent Current	7mA typ.



Z 9125 SAB6456 1GHZ PRESCALER IC

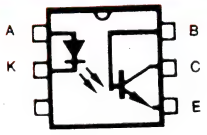
Specifications

Supply Voltage	4.5-5.5 Volts
Current Consumption	21mA (typ)
Max. Input Signal	300mV rms min
Input Sensitivity	10mV rms max
Input Frequency Range	70-1000MHz
Output Voltage	1 Volt (p-p)
Divide ratio	64 with MC pin open circuit 256 with MC pin connected to ground

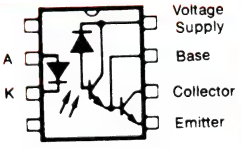


OPTO COUPLERS

	LED				TRANSISTOR				DEVICE			
TYPE	Vr (V)	If (mA)	Vf @ V	If (mA)	Vce (V)	Vcb (V)	Vces @ (V)	Ic (mA)	Hfe	Ic/If	Viso (kV)	Ptot (mW)	CASE
H11A1	3	60	1.15	10	30	70	0.1	0.5	500	2.5	7.5	250	D6
4N25	3	80	1.5	10	30	70	0.5	2	325	0.5	2.5	250	D6
4N28	3	80	1.5	10	30	–	0.5	2	325	0.2	0.5	250	D6
SFH601	6	60	1.6	60	70	–	0.4	2.5	–	>0.4	5.3	250	D6
6N138	5	20	1.7	1.6	7	–	0.06	6.4	–	>3	3	135	D8



D6



D8

Z 4516 3021 OPTO-COUPLED TRIAC DRIVER

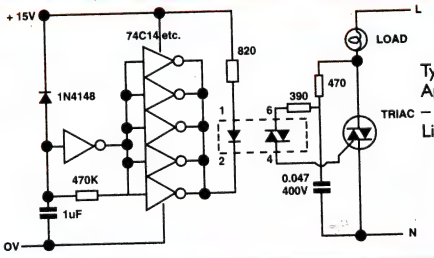
This opto-coupled triac driver consists of a gallium-arsenide infrared LED optically coupled to a silicon bilateral switch (SBS) in a 6 pin DIL pack. They are designed for general applications requiring isolated triac triggering such as interfacing TTL to mains control equipment. The device features low trigger current, high isolation and blocking voltages, and low cost.

Specifications:

Package Dissipation	330mW
Surge Isolation Voltage	7500V
SBS Dissipation	300mW
SBS Blocking Voltage (Pk)	400V
SBS dv/dt	10V/uS (typ.)

Specifications:

SBS Current (Pk)	100mA
SBS On Voltagem(max)	3V
LED Trigger Current (max)	15mA
LED Fsw Voltage (max)	1.5V
LED Current (max)	50mA



Typical Application – Flashing Light

CMOS DTMF ENCODER

Z 5087 TCM5087

Supply Voltage
3.5 – 10V

Unloaded Supply Current
Standby 200uA max. Vdd=10V
Operating 10mA max. Vdd=10V

Power Dissipation
1.15W max

DTMF Output Pin 16
(emitter follower output)
Loading; Vdd<5V 620 ohms min.
Vdd>5V 330 ohms min.

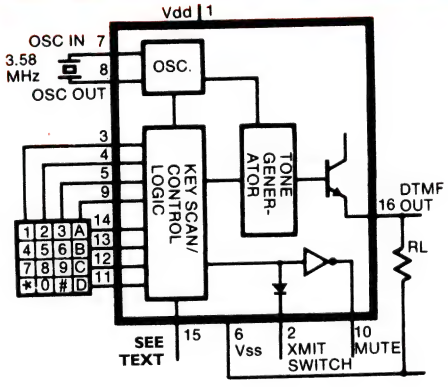
RMS Signal Output, Pin 16
High Tones 396 – 630mV
Low Tones 317 – 504mV

Frequency Error
0.73% max.

Transmit, Pin 2
Emitter follower. High when no keyboard input, low when DTMF active.

Mute, Pin 10
CMOS gate output. Low when no keyboard input and high when DTMF active.

Single Tone Inhibit, Pin 15
Has an internal pull-up. Connect to Vss to inhibit single tones.



Z 5088 HM-9187

Supply Voltage
2 – 5.5V

Unloaded Supply Current
Standby 20uA max. Vdd=2.5V
Operating 2mA max. Vdd=2.5V

Power Dissipation
500mW max

DTMF Output Pin 16
(emitter follower output)
Loading; 1 Kohms min.

RMS Signal Output, Pin 15
High Tones 168–311mV
Low Tones 150–220mV

Frequency Error
0.73% max.

Transmit, Pin 2
Open Drain output. High when no keyboard input, low when DTMF active.

Mute, Pin 10
CMOS gate output. Low when no keyboard input and high when DTMF active.

Unbuffered DTMF Output, Pin 15
Loading: 10 kohms. min. for Dist <= -23dB

145436 DTMF ENCODER

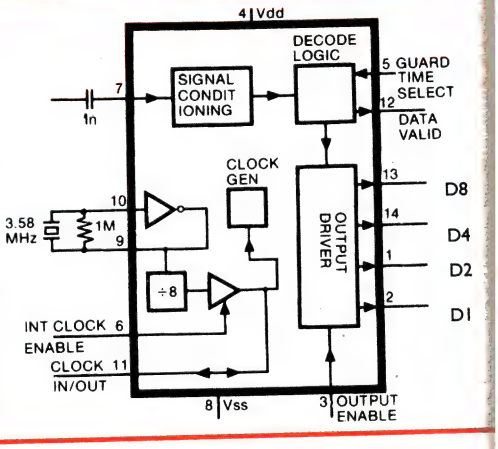
Specifications

Supply Voltage	Vdd	4.5-5V
Supply Current	Idd	15mA (max)
Input Impedance	Rin	90k ohms (min)
Input Signal Level		14mV-615mV
Detection Bandwidth		5% (typ)
Output Current (Data/Data Valid Pins)	Ioh Iol	800uA 1mA
Tone On Time (for detection)		40mS (min)
Tone Off Time (for detection)		40mS (min)
Detection Time (Pin5=Vss)		22-40ms
Detection Time (Pin5=Vdd)		32-50ms
Release Time (Pin5=Vss)		28-40ms
Release Time (Pin5=Vdd)		18-30ms

Notes: 1. **Guard time** selects detect and release times.
2. **Data valid** output signals a valid detection.

OUTPUT CODES

Digit	D8	D4	D2	D1
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
0	1	0	1	0
*	1	0	1	1
#	1	1	0	0
A	1	1	0	1
B	1	1	1	0
C	1	1	1	1
D	0	0	0	0



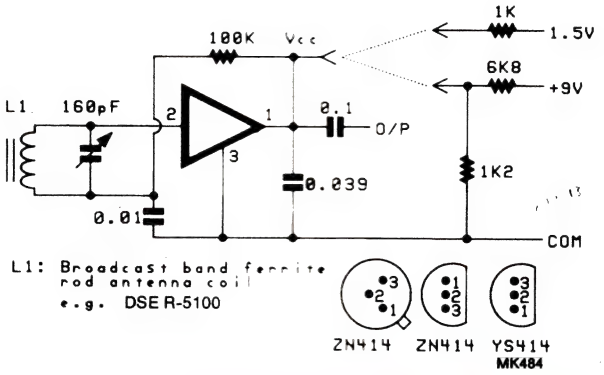
Z 6525 TRF RADIO IC

This device is a 10-transistor TRF circuit containing an RF amplifier, active detector and AGC housed in a space saving 3 pin package. The circuit features high quality audio, low current consumption, no alignment and complete stability.

A typical application is shown with two alternative power source possibilities.

Specifications

Supply Voltage	1.1 to 1.8V
Supply Current	0.3 to 0.5mA
Frequency Range	0.15 to 3MHz
Input Resistance	4M ohms
THD	4%
Power Gain	72dB
AF Output	30mV RMS
(Vin=10mV m=30%)	

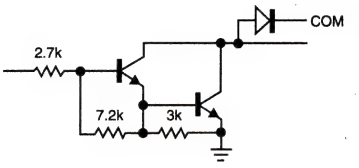


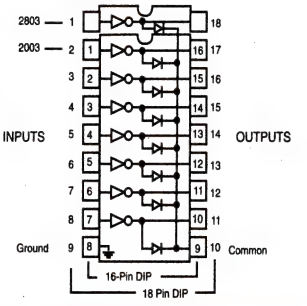
DARLINGTON DRIVER ICs

These devices comprise either seven or eight Darlington connected transistors in a common emitter, open collector arrangement. Each Darlington pair is provided with a clamping diode, and series input resistor to allow operation directly from TTL/CMOS operating at 5 volts. Typical applications include display, solenoid and relay drivers.

Specifications

Device	**Z-5380 (2003)**	**Z-6282 (2803)**
Number of drivers in package	7	8
Number of pins	16	18
Collector Emitter Voltage (max)	50V	50V
Collector Current (max)	350mA	500mA
Vce (sat) (Ic = 350mA, Ib = 0.5mA)	1.6V	1.6V
Input Voltage (Vce = 2V, Ic = 350mA)	3.0V	3.0V
Clamp Diode Vf (If = 350mA)	2.0V	2.0V
Max. Power Dissipation (25°C)	1.8W	1.8W
Representative Devices	ULN2003 DS2003 uA9667	ULN2803



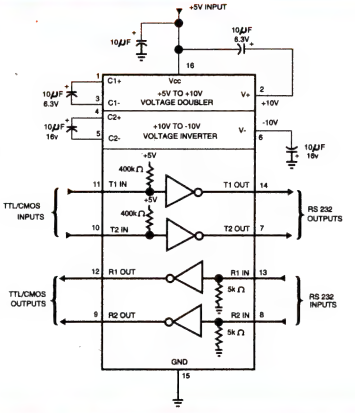


Z 5369 CMOS SINGLE-RAIL RS-232 INTERFACE

The Z 5369 provides 2 RS-232 inputs and 2 outputs. The device features on-chip dc-dc converters to generate the bipolar RS-232 supplies from a single 5 volt rail.

SPECIFICATIONS

Supply Voltage	Vdd	4.5 to 5.5V
Supply Current	idd	5mA (typ)
Driver Input Voltage	Vil Vih	0.8V (max) 2V (min)
Driver Input Current	Iil	-200uA (max)
Driver Output Swing	Voh Vol	5V (min @ Rl=3K) -5V (min @ Rl=3K)
Driver Output Resistance	Ro	300 ohms (min)
Output Short Circuit Current	Isc	10mA (typ)
Receiver Input Threshold	Vih Vil	1.7V (typ) 1.2V (typ)
Receiver Input Resistance	Rin	3K to 5K
Recommended dc-dc Capacitors		1 to 47 uF



USING POWER MOSFETS

MOSFETs have undergone considerable development in the last decade and offer several advantages over common bipolar transistors, particularly in switching applications.

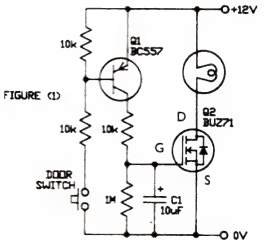
The most common power MOSFETs are N-channel enhancement mode devices. These are not unlike NPN bipolar transistors in that the Source is usually the most negative terminal and the Drain is the most positive. No current flows through the Drain-Source channel when there is zero volts between the Gate and Source but the channel conducts when a high enough positive voltage, typically 2 to 4 volts, is applied between the Gate and the Source. At higher Gate to Source voltages of around 10 volts the Drain-Source channel is fully conducting and is equivalent to a very low value resistor – typically 0.1 ohms.

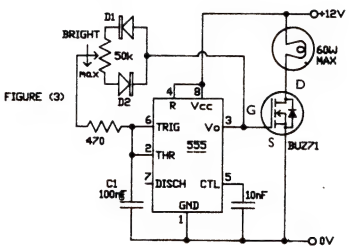
Although MOSFETs are fairly rugged, the Gate is very susceptible to electrostatic damage and normal antistatic techniques should be used when handling and installing MOSFETs.

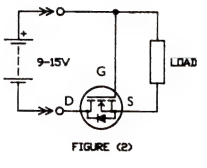
In the circuits below, figure 1 shows a car interior light extender. When one of the car doors is opened, its door switch closes and draws base current through Q1. Q1 conducts, charging C1 and provides sufficient gate voltage for Q2 to switch on. When the door switch opens, Q1 is turned off and C1 discharges via the 1M resistor. After about 10 seconds the voltage on C1 falls below the FET's Gate threshold voltage and Q2 switches off. As the MOSFET switches off slowly, it dissipates several watts of heat for a short period but should not need a heatsink for normal, infrequent switching.

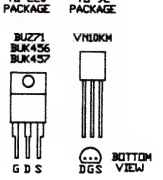
A novel reverse-polarity protection circuit is shown in figure 2. If the supply is connected correctly, the FET's inherent Drain-Source diode conducts, allowing almost the full supply voltage to appear across the load. The gate is now biased on, causing the Drain-Source channel to fully conduct and short-circuit the diode. If the supply is reversed the diode will not conduct and the FET, having no Gate bias, will block current flow. The major advantage of this circuit over a simple series diode is the much lower voltage drop lost across the FET.

Figure 3 shows a high efficiency dimmer for 12V filament lamps. The 555 timer IC is configured as a variable duty cycle, astable oscillator running at around 300Hz. No heatsink should be necessary for loads of up to 40W and only a small heatsink (30° C/W) is needed for 60W loads.







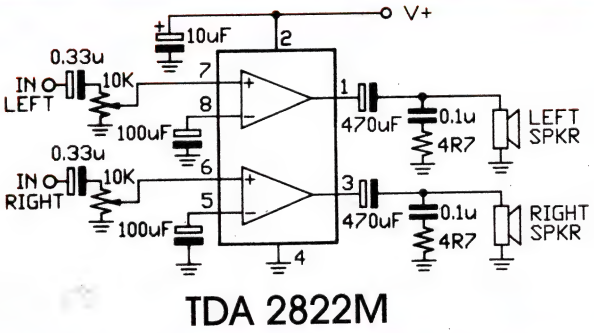


Z 6070 TDA2822M DUAL LOW-VOLTAGE POWER AMPLIFIER

The TDA2822M offers low voltage, low quiescent current operation and high power output from an 8-pin DIP package.

Specifications

Supply Voltage	1.8-15V
Quiescent Current	9mA max.
Gain	39dB typ.
Channel Balance	1dB
Input Resistance	100k ohm
Power Output (typ.) (1kHz, 10% dist.)	220mW @ 6V, 16 ohms 380mW @ 6V, 8 ohms 1000mW @ 9V, 8 ohms 650mW @ 6V, 4 ohms 110mW @ 3V, 4 ohms
Rth j-amb	100 K/W
Rth j-pin	70 K/W
Max Junction Temp.	150°C



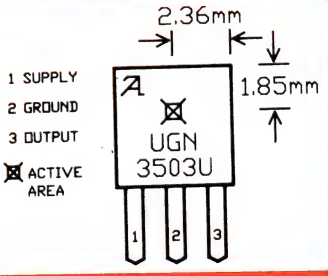
Z 2620 UGN3503 LINEAR HALL SENSOR

Linear Hall effect sensors can be used as contactless switches, linear potentiometers, position sensors and current sensors. Unlike optical sensors, the Hall sensors are generally immune to dirt, and unlike inductive coil sensors, these devices can detect both changing and static magnetic fields.

The output voltage of the sensor in the absence of a magnetic field is nominally one half the supply voltage. A south magnetic pole presented to the branded face of the sensor will cause the output voltage to increase. A north magnetic pole will cause the output voltage to decrease.

Specifications

Operating Voltage	4.5-6V	Bandwidth (-3dB)	23kHz typ.
Supply Current	14 mA max.	Broadband Noise O/P (10Hz-10kHz)	90uV typ.
Quiescent O/P Voltage (B=0)	2.5V typ.	Output Impedance	50 ohms typ.
Sensitivity	13V/Tesla.	Operating temperature Range	-20°C to +85°C



Z 6011 UPC 1688G WIDE-BAND AMPLIFIER IC

The NEC device uPC1688G is a monolithic low-noise high-gain wideband IC amplifier in a 4-pin surface mount package. This device features a flat gain over a wide bandwidth covering HF to UHF, and typical applications include mast-head and RF preamplifiers in 50 or 75 ohm systems.

ELECTRICAL CHARACTERISTICS **(Ta=25°C, Vcc=5V, Z_S=Z_L=50 ohms)**

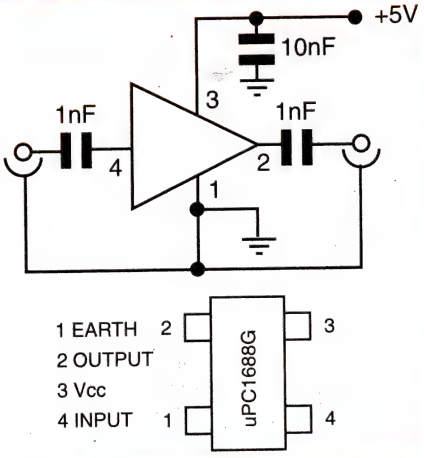
CHARACTERISTIC	SYMBOL	MIN.	AV.	MAX.	UNIT	TEST CONDITION
Circuit Current	I_{CC}	14	19	24	mA	No input signal
Power Gain	G_V	18	21	23	dB	f=0.5GHz, (G_V=S_{21})
Noise Figure	NF		4.0	5.5	dB	f=0.5GHz
Upper Limit Freq.	f_U	0.9	1.1		GHz	3dB down below 0.1GHz gain
Isolation	ISL	23	27		dB	f=0.5GHz
Input Return Loss	RLin	10	13		dB	f=0.5GHz, RLin=S_{11}
Output Return Loss	RLout	10	13		dB	f=0.5GHz, RLout=S_{22}
Maximum Output Level	P_O	2	4		dBm	f=0.5GHz, Pin=-5dBm

Specifications

Supply Voltage	5V
Frequency Response	1GHz typ.
Power Gain	21dB typ. @ 0.5GHz
Gain Flatness	+/- 1dB typ. 0.1 to 0.7GHz

Absolute Maximum Ratings (Ta=25°C)

Supply Voltage	6V
Input Power	+10dB
Total Power Dissipation	200mW
Operating Temp Range	-40 to +85°C



R 1797 NTC THERMISTOR

These Negative Temperature Coefficient (NTC) Thermistors are useful for temperature sensing, temperature compensation, automatic gain control and fluid flow monitoring. They are not for use in conducting, reducing or aggressive gases or fluids. The resistance of the R 1797 can be calculated from the formula:

$$R = Ae^{B/T}$$

where, **R** is the thermistor resistance in ohms,
T is the temperature in Kelvins,
e is the natural logarithm base (2.718) and
A & B are constants which should be calculated from measurements on each particular thermistor for best accuracy.

For nominal values of B and R, A is approximately 0.0277.

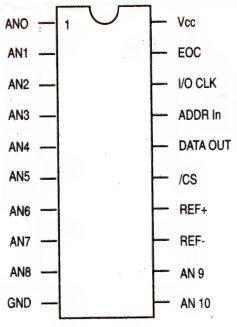
Specifications

Maximum power dissipation	0.5W
Operating temperature range	
at zero power	-25°C to 125°C
at max. power	0 to 55°C
Thermal time constant	17s approx.
Resistance Value at 25°C	100k-ohms +/-10%
B (@ 25°C & 85°C)	4500 +/-5%
Temp. Co. -5.2% / K	

Z 6830 TLC542C 11-INPUT SERIAL A-D CONVERTER

The Z 6830 is a serial 8-bit successive approximation analogue to digital converter. This chip is used for the A-D component of the K 2805 Parallel Port Interface Kit.

The TLC542C is operated via a 5-wire interface from a microprocessor or parallel I/O port. 11 analogue inputs (AN0-AN10) are available for use, a further analogue channel (AN11) is internally connected to half the supply rail, and can be used as a self-test or battery check. Once the 4-bit address has been received the A-D conversion is initiated. This conversion is internally clocked and completed in 20uS. The voltage reference pins Ref+ and Ref- can be connected directly to Vcc and Ground respectively, to directly suit a 0V to +5V range at the analogue inputs. The chip is addressed via the 3 input pins, /CS (chip select), IO-CLK, and ADDR IN. This operation takes 8 clock cycles; For the first 4 clock cycles, 4 address bits are written (MSB first) to ADDR IN to specify the analogue input for the next conversion. During these 8 clock cycles the 8-bit result from the previous A-D conversion is available in serial form at the DATA OUT pin (MSB first). The EOC (end of conversion) pin signals when the A-D conversion is complete.



SPECIFICATIONS

Conversion Time	20uS typ.
Power Dissipation	10mW typ.
Unadjusted Error (for differential Vref > 4.75V)	+/-0.5 LSB max.

	MIN.	NOM.	MAX.
Supply Voltage	4.75	5.0	5.5V
Analogue Input Voltage	0		Vcc
Diff. Reference Voltage	1	Vcc	Vcc+0.2V
Clock frequency	0	1.1 MHz	

COMMON CONNECTORS

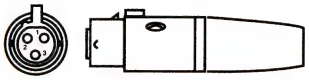
DIN CONNECTORS

Contact Arrangement	Application		Connections 1	2	3	4	5
MALE PLUG	Microphone	Mono (balanced)	Hot lead	Screening: earth	Return lead		
		Mono (unbalanced)	Hot lead				
	Microphone	Stereo (balanced)	Hot lead of left-hand channel		Return lead of left-hand channel	Hot lead of right-hand channel	Return lead of right-hand channel
		Stereo (unbalanced)	Hot lead of left-hand channel			Hot lead of right-hand channel	
FEMALE SOCKET	Turntable		Monaural system		Hot lead		Connected to 3
		Stereophonic system			Hot lead of left-hand channel		Hot lead of right-hand channel
	Tape Recorder	Monaural system	Input signal		Output signal	Connected to 1	Connected to 3
		Stereophonic system	Input signal of left-hand channel		Output signal of left-hand channel	Input signal of right-hand channel	Output signal of right-hand channel

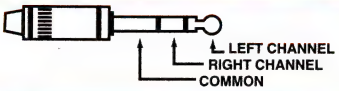
3-PIN XLR CONNECTORS

Widely used in professional audio applications these connectors generally offer a locking mechanism, very good cable clamping and low contact resistance. The pins are arranged so that when the connectors mate, one pin (used as the ground pin) always makes contact before the other two.

IEC STANDARD	COMMON ALTERNATIVE
1. Earth/Shield	1. Earth/Shield
2. In Phase (hot)	2. Out of Phase
3. Out of Phase (cold)	3. In Phase

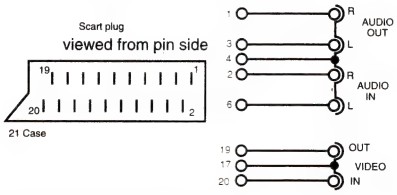


HEADPHONE PLUG



SCART CONNECTOR

The Scart connector, also known as the Euroconnector or Peri-Television connector, is part of a system for connecting television receivers and other home entertainment equipment. A Scart connector has 21 pins which provide for stereo audio and composite video in and out, RGB, two data lines and two control lines. A variation allows for separate chrominance and lumunance signals.

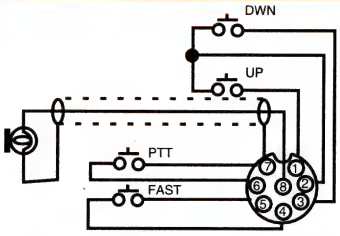


Notes:

1. Pin 8 is used to select between an internal and external composite video signal. +12V applied to this pin will enable the composite video input on pin 20. Alternatively, this pinput may be enabled via a control on the video display device, e.g. an external AV select switch.
2. Pin 16 is a control line to select the external RGB inputs. +3V applied to this pin enables the RGB inputs on pins 15, 11 and 7.
3. When used for S-VHS signals, pin 15 carries chrominance and pin 20 luminance.
4. Pin 10 and 14 have been assigned for data for controlling and monitoring other appliances.

PIN	USE	LEVEL/IMPEDANCE
1	Audio Output (R)	0.5V/1K-ohm
2	Audio Input (R)	0.5V/10K-ohm
3	Audio Output (L)	0.5V/1K-ohm
4	Audio Ground	
5	Blue Ground	
6	Audio Input (L)	0.5V/10K-ohm
7	Blue	0.7Vp-p/75 ohm
8	Status (CVBS)	L: 0-2V H: 10-12V/10K-ohm
9	Green Ground	
10	Data D2B (Inverted)	
11	Green	0.7Vp-p/75 ohm
12	Data D2B	
13	Red Ground	
14	D2B Ground	
15	Red	0.7Vp-p/75 ohm
16	RGB Status/Fast Blanking	L: 0-0.4V H: 1–3V/75 ohm
17	CVBS Video Ground	
18	RGB Status Ground	
19	Composite Video Output	1V/75 ohm
20	Composite Video Input	1V/75 ohm
21	Case/shield	

YAESU 8-PIN MICROPHONE CONNECTION



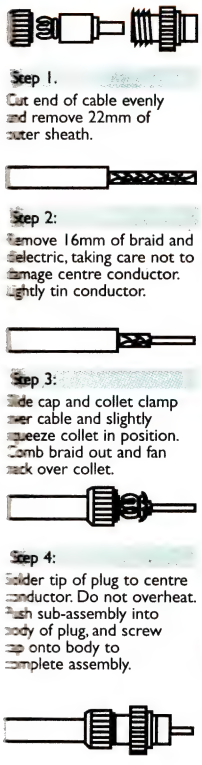
Commonly used on base and mobile transceivers

GET IT RIGHT!

Note the locations of the Active, Neutral and Earth pins, and their associated wire colours in the table below. If you are replacing a mains plug or socket on an extension cord, then follow exactly the wiring instructions supplied with the mains plug or socket.

WIRING RF PLUGS

BELLING-LEE TYPE



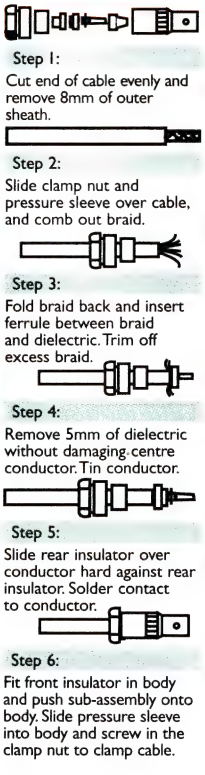
Step 1.
Cut end of cable evenly and remove 22mm of outer sheath.

Step 2:
Remove 16mm of braid and dielectric, taking care not to damage centre conductor. Lightly tin conductor.

Step 3:
Slide cap and collet clamp over cable and slightly squeeze collet in position. Comb braid out and fan back over collet.

Step 4:
Solder tip of plug to centre conductor. Do not overheat. Push sub-assembly into body of plug, and screw cap onto body to complete assembly.

BNC TYPE (FEMALE)



Step 1:
Cut end of cable evenly and remove 8mm of outer sheath.

Step 2:
Slide clamp nut and pressure sleeve over cable, and comb out braid.

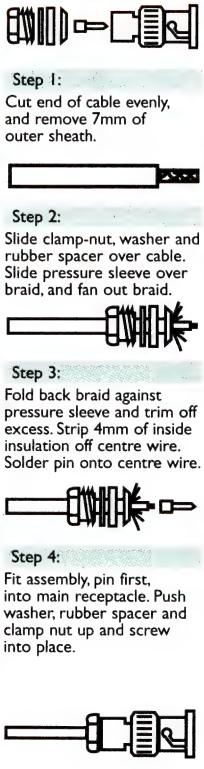
Step 3:
Fold braid back and insert ferrule between braid and dielectric. Trim off excess braid.

Step 4:
Remove 5mm of dielectric without damaging centre conductor. Tin conductor.

Step 5:
Slide rear insulator over conductor hard against rear insulator. Solder contact to conductor.

Step 6:
Fit front insulator in body and push sub-assembly onto body. Slide pressure sleeve into body and screw in the clamp nut to clamp cable.

BNC TYPE (MALE)



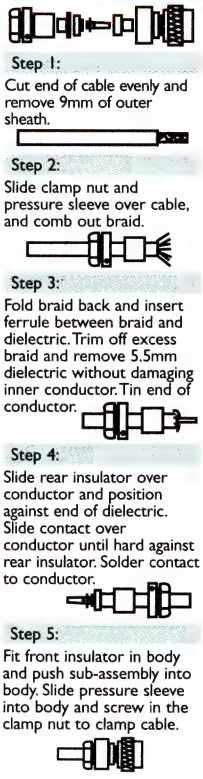
Step 1:
Cut end of cable evenly, and remove 7mm of outer sheath.

Step 2:
Slide clamp-nut, washer and rubber spacer over cable. Slide pressure sleeve over braid, and fan out braid.

Step 3:
Fold back braid against pressure sleeve and trim off excess. Strip 4mm of inside insulation off centre wire. Solder pin onto centre wire.

Step 4:
Fit assembly, pin first, into main receptacle. Push washer, rubber spacer and clamp nut up and screw into place.

'N' TYPE



Step 1:
Cut end of cable evenly and remove 9mm of outer sheath.

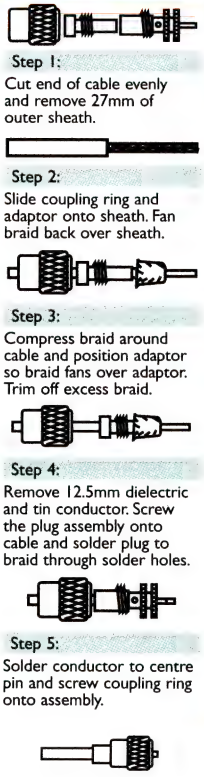
Step 2:
Slide clamp nut and pressure sleeve over cable, and comb out braid.

Step 3:
Fold braid back and insert ferrule between braid and dielectric. Trim off excess braid and remove 5.5mm dielectric without damaging inner conductor. Tin end of conductor.

Step 4:
Slide rear insulator over conductor and position against end of dielectric. Slide contact over conductor until hard against rear insulator. Solder contact to conductor.

Step 5:
Fit front insulator in body and push sub-assembly into body. Slide pressure sleeve into body and screw in the clamp nut to clamp cable.

UHF TYPE



Step 1:
Cut end of cable evenly and remove 27mm of outer sheath.

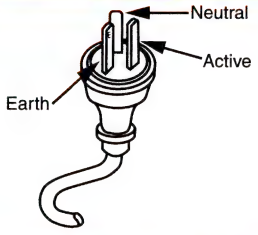
Step 2:
Slide coupling ring and adaptor onto sheath. Fan braid back over sheath.

Step 3:
Compress braid around cable and position adaptor so braid fans over adaptor. Trim off excess braid.

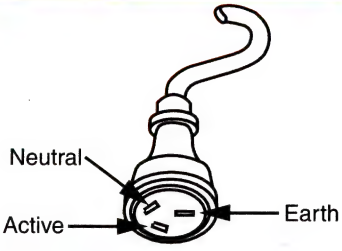
Step 4:
Remove 12.5mm dielectric and tin conductor. Screw the plug assembly onto cable and solder plug to braid through solder holes.

Step 5:
Solder conductor to centre pin and screw coupling ring onto assembly.

PLUG



SOCKET & POWER POINT



Colour Code Table

CONDUCTOR		OLD
Active	Brown	Red
Neutral	Blue	Black
Earth	Green/Yellow	Green

PC VIDEO CONNECTIONS

PIN#	VGA	EGA	CGA	MDA
1	RED	GND.	GND.	GND.
2	GREEN/MONO	RED 2	GND.	GND.
3	BLUE	RED	RED	–
4	–	GREEN	GREEN	–
5	–	BLUE	BLUE	–
6	R-GND.	GREEN 2/INTENSITY	+INTENSITY	+INTENSITY
7	G-GND.	BLUE 2/MONO VIDEO	–	+VIDEO
8	B-GND.	HORIZONTAL DRIVE	+HOR. DRV.	+HOR. DRV.
9	–	VERT. DRV.	–VERT. DRV.	–VERT. DRV.
10	GND.			
11	GND. (COLOUR)			
12	–			
13	HOR. SYNC.			
14	VERT. SYNC.			
15	–			

PARALLEL PRINTER CONNECTIONS

FUNCTION AT PRINTER	PRINTER PIN#	PC PIN#
–STROBE IN	1	1
–DATA 1 IN	2	2
+DATA 2 IN	3	3
+DATA 3 IN	4	4
+DATA 4 IN	5	5
+DATA 5 IN	6	6
+DATA 6 IN	7	7
+DATA 7 IN	8	8
+DATA 8 IN	9	9
–SELECT IN	36	17

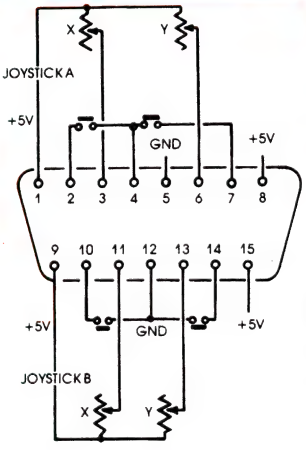
FUNCTION AT PRINTER	PRINTER PIN#	PC PIN#
+AUTO LF IN	14	14
–INIT IN	31	16
–ACK, OUT	10	10
+BUSY OUT	11	11
+PAPER END OUT	12	12
+SELECT OUT	13	13
–FAULT OUT	32	15
GND.	19-30	18-25

KEYBOARD CONNECTORS

PC/XT/AT	
1	+KDB CLOCK
2	+KBD DATA
3	–KBD RESET
4	GND.
5	+5V

PS/2 (KBD/MOUSE) PIN#	FUNCTION
1	+ DATA
2	–
3	GND.
4	+ 5V
5	+ CLOCK
6	–

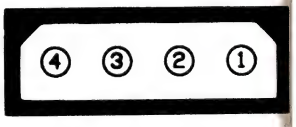
PC GAMES ADAPTOR



PC FLOPPY DRIVE POWER CONNECTIONS

PIN	POWER
1	+ 12 Volts
2	12 Volts return
3	5 Volts return
4	+ 5 Volts

Front view of connector on disk drive



R 1802 METAL OXIDE VARISTOR

Metal Oxide Varistors are voltage dependent symmetrical resistors intended to protect equipment from transient voltages resulting from lightning strikes, load dumps etc. When subjected to a high-energy voltage transient, the device's impedance changes from a high standby value to a very low conducting value. The use of these devices not only significantly reduces the chance of electrical damage but also improves equipment reliability.

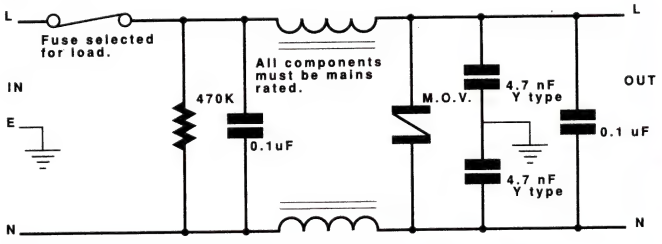
Ratings and Characteristics

Maximum continuous voltage	
sine wave RMS	275V
DC	350V
Maximum Energy (10/100uS pulse)	75J
Maximum dissipation	600mW
Peak Current (single 8/20uS pulse)	4500A
Minimum Varistor Voltage (1mA d.c. test)	387V
Maximum Clamping Voltage (50A, 8/20uS)	710V
Typical Capacitance	460pF

Note: An 8/20uS pulse refers to a pulse which rises from 10% to 90% in 8uS and falls from 100% to 50% in 20uS. This pulse is considered to be representative of lightning strikes.

A circuit showing a typical application of a device in a line filter is shown.

Note that because a varistor may explode if subjected to energy levels in excess of maximum ratings, protective fusing and/or shielding is recommended to guard against physical damage.



R 1804 GAS ARRESTER

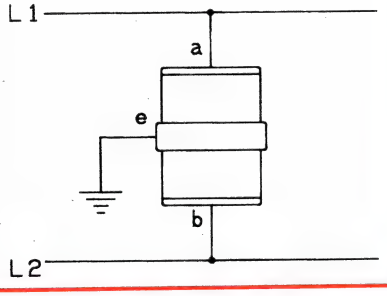
Gas arresters offer protection against voltage transients by switching to a low voltage arc state when their spark-over voltage is exceeded. Under normal conditions the devices are effectively open-circuit, presenting a small capacitance between electrodes.

Because the devices clamp to around 10 to 20 volts while in the arcing condition, they are not suitable for connection across higher voltage, low impedance supply lines such as 240V mains. They are suitable for use in lower voltage, current limited applications such as in telecommunications networks and antenna circuits.

Model R 1804 is a 3 electrode device for connection between 2 lines and ground. It is Austel certified for use in telecommunications equipment. (Austel CCL A90/ME/0041.)

Ratings and Characteristics

Discharge Current		
	(8/20uS pulse a+b-e)	20000A
	(a-e, b-e)	10000A
	(AC 50Hz a+b-e)	20A
	(a-e, b-e)	10A
Sparkover Voltage		
	(DC a-e, b-e)	480-720V
	(Impulse a-e, b-e)	<1200V
Insulation Resistance	(@ 100V)	>10^{10}ohms
Capacitance	(a-e, b-e)	<2.2pF
	(a-b)	<1.2pF



HEXADECIMAL CONSTANTS

HEX CODE	MOST SIGNIFICANT BYTES IV	III	LEAST SIGNIFICANT BYTES II	I
0	0	0	0	0
1	4096	256	16	1
2	8192	512	32	2
3	12288	768	48	3
4	16384	1024	64	4
5	20480	1280	80	5
6	24576	1536	96	6
7	28672	1792	112	7
8	32768	2048	128	8
9	36864	2304	144	9
A	40960	2560	160	10
B	45056	2816	176	11
C	49152	3072	192	12
D	53248	3328	208	13
E	57344	3584	224	14
F	61440	3840	240	15

HEX-TO-DECIMAL CONVERSION

Decimal Value = IV + III + II + I

THE RS-232C INTERFACE

THE BASIC RS-232C ELECTRICAL SPECIFICATION

Communication rate:
0-20,000 bits per second

Driver output voltage levels maximum no load:
-25V logic 1, +25V logic 0

Driver output voltage ranges for loads between 3k and 7k ohms:
logic 1: -15V (7k) and -5V (3k)
logic 0: +15V (7k) and +5V (3k)

Driver output current, short circuit:
500mA maximum

Driver output impedance with power off:
300 ohms minimum

Maximum driver output slew rate:
30V per microsecond

Receiver input resistance:
7k ohms maximum
3k ohms minimum

Effective receiver input capacitance:
2500pF maximum

Maximum receiver input voltage range:
-25V to +25V

The following table shows the nine most common signals used for serial communications and their pin allocations for nine and 25 pin connectors.

	SIGNAL NAME	PIN NO. (9 PIN)	PIN NO. (25 PIN)
TD	Transmitted Data	3	2
RD	Received Data	2	3
RTS	Request to Send	7	4
CTS	Clear to Send	8	5
DSR	Data Set Ready	6	6
SG	Signal Ground	5	7
CD	Carrier Detect	1	8
DTR	Data Terminal Ready	4	20
RI	Ring Indicator	9	22

ASCII CHARACTER CODES AS DEFINED IN ANSI X3.4

DEC	HEX	CHAR	DEC	HEX	CHAR	DEC	HEX	CHAR	DEC	HEX	CHAR
0	0	NUL	33	21	!	66	42	B	99	63	c
1	1	SOH	34	22	"	67	43	C	100	64	d
2	2	STX	35	23	#	68	44	D	101	65	e
3	3	ETX	36	24	$	69	45	E	102	66	f
4	4	EOT	37	25	%	70	46	F	103	67	g
5	5	ENQ	38.	26	&	71	47	G	104	68	h
6	6	ACK	39	27	'	72	48	H	105	69	i
7	7	BEL	40	28	(	73	49	I	106	6A	j
8	8	BS	41	29	)	74	4A	J	107	6B	k
9	9	HT	42	2A	*	75	4B	K	108	6C	l
10	A	LF	43	2B	+	76	4C	L	109	6D	m
11	B	VT	44	2C	,	77	4D	M	110	6E	n
12	C	FF	45	2D	-	78	4E	N	111	6F	o
13	D	CR	46	2E	.	79	4F	O	112	70	p
14	E	SO	47	2F	/	80	50	P	113	71	q
15	F	SI	48	30	0	81	51	Q	114	72	r
16	10	DLE	49	31	1	82	52	R	115	73	s
17	11	DC1	50	32	2	83	53	S	116	74	t
18	12	DC2	51	33	3	84	54	T	117	75	u
19	13	DC3	52	34	4	85	55	U	118	76	v
20	14	DC4	53	35	5	86	56	V	119	77	w
21	15	NAK	54	36	6	87	57	W	120	78	x
22	16	SYN	55	37	7	88	58	X	121	79	y
23	17	ETB	56	38	8	89	59	Y	122	7A	z
24	18	CAN	57	39	9	90	5A	Z	123	7B	{
25	19	EM	58	3A	:	91	5B	[	124	7C	|
26	1A	SUB	59	3B	;	92	5C	\	125	7D	}
27	1B	ESC	60	3C	<	93	5D	]	126	7E	~
28	1C	FS	61	3D	=	94	5E	→	127	7F	DEL
29	1D	GS	62	3E	>	95	5F	-			
30	1E	RS	63	3F	?	96	60	‘			
31	1F	US	64	40	@	97	61	a			
32	20	SPACE	65	41	A	98	62	b			

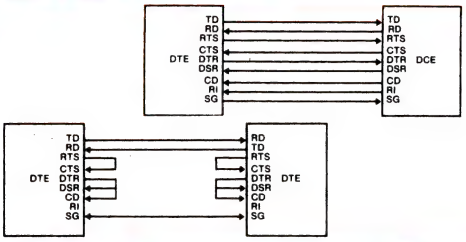
ASCII CONTROL CODES

NUL	(Ctrl @)	Null	DLE	(Ctrl P)	Data Link Escape
SOH	(Ctrl A)	Start of Heading	DC1	(Ctrl Q)	Device Control 1
STX	(Ctrl B)	Start of Text	DC2	(Ctrl R)	Device Control 2
ETX	(Ctrl C)	End of Text	DC3	(Ctrl S)	Device Control 3
EOT	(Ctrl D)	End of Transmission	DC4	(Ctrl T)	Device Control 4
ENQ	(Ctrl E)	Enquiry	NAK	(Ctrl U)	Negative Acknowledge
ACK	(Ctrl F)	Acknowledge	SYN	(Ctrl V)	Synchronous Idle
BEL	(Ctrl G)	Bell	ETB	(Ctrl W)	End of Transmission Block
BS	(Ctrl H)	Backspace	CAN	(Ctrl X)	Cancel
HT	(Ctrl I)	Horizontal Tab	EM	(Ctrl Y)	End of Medium
LF	(Ctrl J)	Line Feed	SUB	(Ctrl Z)	Substitute
VT	(Ctrl K)	Vertical Tab	ESC	(Ctrl [)	Escape
FF	(Ctrl L)	Form Feed	FS	(Ctrl \)	File Separator
CR	(Ctrl M)	Carriage Return	GS	(Ctrl])	Group Separator
SO	(Ctrl N)	Shift Out	RS	(Ctrl ^)	Record Separator
SI	(Ctrl O)	Shift In	US	(Ctrl _)	Unit Separator

COMMON RS-232C CONNECTIONS

Each signal (except ground) is either an input or an output depending whether it is on the Data Terminal Equipment 'DTE' (e.g. a computer terminal) or the Data Circuit Terminating Equipment 'DCE' (e.g. a modem). A typical connection is shown here.

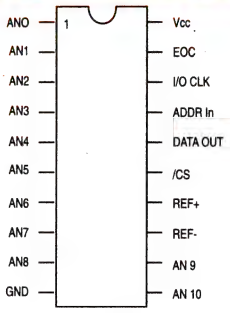
When two computer terminals (DTEs) are connected together a 'null modem' hook-up is needed to fool each DTE into thinking that it is connected to DCE. A typical null modem connection is shown here.



Z 6830 TLC542C 11-INPUT SERIAL A-D CONVERTER

The Z 6830 is a serial 8-bit successive approximation analogue to digital converter. This chip is used for the A-D component of the K 2805 Parallel Port Interface Kit.

The TLC542C is operated via a 5-wire interface from a microprocessor or parallel I/O port. 11 analogue inputs (AN0-AN10) are available for use, a further analogue channel (AN11) is internally connected to half the supply rail, and can be used as a self-test or battery check. Once the 4-bit address has been received the A-D conversion is initiated. This conversion is internally clocked and completed in 20uS. The voltage reference pins Ref+ and Ref- can be connected directly to Vcc and Ground respectively, to directly suit a 0V to +5V range at the analogue inputs. The chip is addressed via the 3 input pins, /CS (chip select), IO-CLK, and ADDR IN. This operation takes 8 clock cycles; For the first 4 clock cycles, 4 address bits are written (MSB first) to ADDR IN to specify the analogue input for the next conversion. During these 8 clock cycles the 8-bit result from the previous A-D conversion is available in serial form at the DATA OUT pin (MSB first). The EOC (end of conversion) pin signals when the A-D conversion is complete.

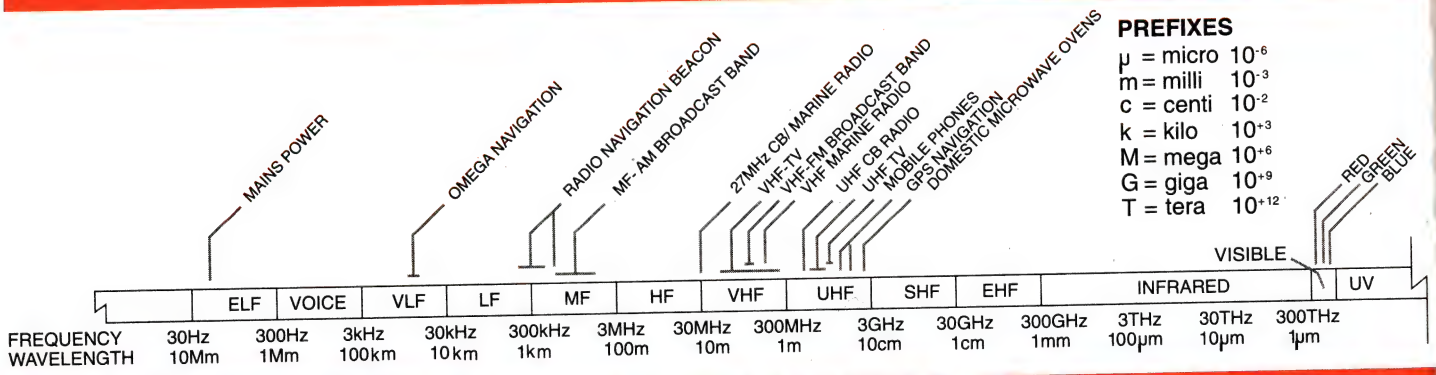


SPECIFICATIONS

Conversion Time	20uS typ.
Power Dissipation	10mW typ.
Unadjusted Error (for differential Vref > 4.75V)	+/-0.5 LSB max.

	MIN.	NOM.	MAX.
Supply Voltage	4.75	5.0	5.5V
Analogue Input Voltage	0		Vcc
Diff. Reference Voltage	1	Vcc	Vcc+0.2V
Clock frequency	0	1.1 MHz	

THE ELECTROMAGNETIC SPECTRUM



PREFIXES

μ	= micro	10^{-6}
m	= milli	10^{-3}
c	= centi	10^{-2}
k	= kilo	10^{+3}
M	= mega	10^{+6}
G	= giga	10^{+9}
T	= tera	10^{+12}

AUSTRALIAN MF-AM BROADCAST STANDARDS

Frequency Range: 526.5-1606.5kHz

Channel Frequencies: 531, 540, 549 ... 1593, 1602 (Note: Some special services are located slightly above this band. Receivers may need modifications.)

Stereo Signal: Compatible quadrature amplitude modulation (C-Quam) 25Hz +/-0.1 Hz with a dev. of 3% to 5% of the quadrature ch

Frequency Response: Within 2dB (50Hz-7.5kHz)

THD: Not exceeding 4% at 80% modulation (400Hz to 5kHz)

Stereo Separation: 18dB min.

AUSTRALIAN VHF-FM BROADCAST STANDARDS

Frequency Range: 88-108MHz

Channel Frequencies: 88.1, 88.3, ... 107.7, 107.9

Deviation: 75kHz

Pre-emphasis/De-emphasis: 50 microseconds

Stereo Channel Subcarrier Frequency: 38kHz

Pilot Frequency: 19kHz

Notes:

1. Ancillary Communications Services may be included in the main program channel.
   Subcarrier Frequency: 67kHz
   Maximum Deviation: 7.5kHz
   Modulation: FSK or FM
   Pre-emphasis: up to 150us
2. The frequencies 87.6, 87.7, 87.8, 87.9 & 88MHz have been released for use by certain Low Power Open Narrowcasting Services, such as Tourist Radio.

AUSTRALIAN COLOUR TV BROADCAST STANDARDS

Channel Width: 7MHz vestigial sideband trans.

Vision Carrier: 1.25MHz above lower frequency edge of channel

Primary Sound Carrier: 5.5MHz above vision carrier

Secondary Sound Carrier: 242.1875kHz above primary sound carrier

Vision Modulation: Negative amplitude modulation

Lines per Picture: 625 lines, interlaced 2:1

Line Frequency: 15625Hz

Field Frequency: 50Hz

Colour Subcarrier Frequency: 4.43361875MHz

Aspect Ratio: 4:3

Horizontal Sync Pulse Amplitude: 100% carrier amplitude

Front Porch: 1.3 – 1.8us

Back Porch: Line blanking interval – (front porch + sync pulse)

Line Blanking Interval: 11.8-12.3us

Black and Blanking Level: 76% peak carrier level

White Level: 20% peak carrier level

Pre-equalisation Pulse Interval: 2.5H (H=line period, 64 us)

Post-equalisation Pulse Interval: 2.5H

Field Sync Pulse Interval: 2.5H

Field Blanking Interval: 2.5 +12us

Ratio peak vision to peak sound carrier: Single sound carrier systems: 10dB
Dual sound carrier systems: Ch1: 13dB, Ch2: 20dB

Sound Modulation: FM

Sound Deviation: +/-50kHz

Audio Pre-emphasis: 50us

AUSTRALIAN TV CHANNELS

CH	VISION CARRIER (MHz)	PRIMARY SOUND CARRIER (MHz)	CH	VISION CARRIER (MHz)	PRIMARY SOUND CARRIER (MHz)
0	46.25	51.75	44	639.25	644.75
1	57.25	62.75	45	646.25	651.75
2	64.25	69.75	46	653.25	658.75
3	86.25	91.75	47	660.25	665.75
4	95.25	100.75	48	667.25	672.75
5	102.25	107.75	49	674.25	679.75
5A	138.25	143.75	50	681.25	686.75
6	175.25	180.75	51	688.25	693.75
7	182.25	187.75	52	695.25	700.75
8	189.25	194.75	53	702.25	707.75
9	196.25	201.75	54	709.25	714.75
10	209.25	214.75	55	716.25	721.75
11	216.25	221.75	56	723.25	728.75
28	527.25	532.75	57	730.25	735.75
29	534.25	539.75	58	737.25	742.75
30	541.25	546.75	59	744.25	749.75
31	548.25	553.75	60	751.25	756.75
32	555.25	560.75	61	758.25	763.75
33	562.25	567.75	62	765.25	770.75
34	569.25	574.75	63	772.25	777.75
35	576.25	581.75	64	779.25	784.75
39	604.25	609.75	65	786.25	791.75
40	611.25	616.75	66	793.25	798.75
41	618.25	623.75	67	800.25	805.75
42	625.25	630.75	68	807.25	812.75
43	632.25	637.75	69	814.25	819.75

Ch. 0-2 VHF Band I
Ch. 3-5 VHF Band II
Ch. 5A-11 VHF Band III
Ch. 28-35 UHF Band IV
Ch. 39-69 UHF Band V

VHF MARINE FREQUENCIES

CH	FREQ SHIP	(MHz) SHORE	CH	FREQ SHIP	(MHz) SHORE
1	156.050	160.650	60	156.025	160.625
2	156.100	160.700	61	156.075	160.675
3	156.150	160.750	62	156.125	160.725
4	156.200	160.800	63	156.175	160.775
5	156.250	160.850	64	156.225	160.825
6	156.300	156.300	65	156.275	160.875
7	156.350	160.950	66	156.325	160.925
8	156.400	156.400	67	156.375	156.375
9	156.450	156.450	68	156.425	156.425
10	156.500	156.500	69	156.475	156.475
11	156.550	156.550	70	156.525	156.525
12	156.600	156.600	71	156.575	156.575
13	156.650	156.650	72	156.625	156.625
14	156.700	156.700	73	156.675	156.675
15	156.750	156.750	74	156.725	156.725
16	156.800	156.800	77	156.875	156.875
17	156.850	156.850	78	156.925	161.525
18	156.900	161.500	79	156.975	161.575
10	156.950	161.550	80	157.025	161.625
20	157.000	161.600	81	157.075	161.675
21	157.050	161.650	82	157.125	161.725
22	157.100	161.700	83	157.175	161.775
23	157.150	161.750	84	157.225	161.825
24	157.200	161.800	85	157.275	161.875
25	157.250	161.850	86	157.325	161.925
26	157.300	161.900	87	157.375	161.975
27	157.350	161.950	87A	157.375	157.375
28	157.5000	162.000	88	157.425	162.025

Ch	Use
6	SAR, Port Operations, Commercial
8	Port Operations, Commercial
9-14	Port Operations
16	Distress and Safety
20	Port Operations
23-28	Public Correspondence (Seaphone)
67	Distress and Safety
68	Port Operations
71	Professional Fishing
72	Yachts, Commercial, Professional Fishing, Port Operations
73	Non-Commercial, Yachts, etc.
74	Commercial
77	Yachts, Professional Fishing
78	Commercial
79	Port Operations
87	Public Correspondence (Seaphone)
87A	Withdrawn 31-3-92

NZ VHF TV CHANNELS

CH	VISION (MHz)	SOUND (MHz)	CH	VISION (MHz)	SOUND (MHz)
1	45.25	50.75	7	196.25	201.75
2	55.25	60.75	8	203.25	208.75
3	62.25	67.75	9	210.25	215.75
4	175.25	180.75	10	217.25	222.75
5	182.25	187.75	11	224.25	229.75
6	189.25	194.75	12	231.25	236.750

AUSTRALIAN & NZ CB RADIO CHANNELS

CH	AUST HF (MHz)	UHF (MHz)	NZ HF (MHz)
1	26.965	476.425	26.330
2	26.975	476.450	26.340
3	26.985	476.475	26.350
4	27.005	476.500	26.370
5	27.015	476.525	26.380
6	27.025	476.550	26.390
7	27.035	476.575	26.400
8	27.055	476.600	26.420
9	27.065	476.625	26.430
10	27.075	476.650	26.440
11	27.085	476.675	26.450
12	27.105	476.700	26.470
13	27.115	476.725	26.480
14	27.125	476.750	26.490
15	27.135	476.775	26.500
16	27.155	476.800	26.520
17	27.165	476.825	26.530
18	27.175	476.850	26.540
19	27.185	476.875	26.550
20	27.205	476.900	26.570
21	27.215	476.925	26.580
22	27.225	476.950	26.590
23	27.255	476.975	26.620
24	27.235	477.000	26.600
25	27.245	477.025	26.610
26	27.265	477.050	26.630
27	27.275	477.075	26.640
28	27.285	477.100	26.650
29	27.295	477.125	26.660
30	27.305	477.150	26.670
31	27.315	477.175	26.680
32	27.325	477.200	26.690
33	27.335	477.225	26.700
34	27.345	477.250	26.710
35	27.355	477.275	26.720
36	27.365	477.300	26.730
37	27.375	477.325	26.740
38	27.385	477.350	26.750
39	27.395	477.375	26.760
40	27.405	477.400	26.770

Emergency Channels

Aust HF (AM)	Ch. 9
Aust UHF	Ch. 5/35
NZ HF	Ch.15

Calling Channels

Aust HF (AM)	Ch.11
Aust HF (SSB)	Ch.16
Aust UHF	Ch.11
NZ HF (AM)	Ch.15

Notes: NZ HF Channels 1-24 are for AM use only.
NZ HF Channels 25-40 are for SSB use only.

AUSTRALIAN 27MHZ MARINE FREQUENCIES

Freq (MHz)	Use
27.680	Commercial organisations. Calling and working ship-ship and ship-shore.
27.720	Professional fishing. Calling and working ship-ship and ship-shore.
27.820	Professional fishing. Calling and working ship-ship and ship-shore.
27.860	Distress, safety and calling, supplementary to 27.880
27.880	Distress, safety and calling.
27.900	Non Commercial organisations. Calling and working ship-shore.
27.910	Non Commercial organisations. Calling and working ship-shore.
27.940	Non Commercial organisations. Calling and working for club events, ship-shore and ship-ship.
27.960	Non-Commercial organisations. Calling and working, ship-ship.
27.980	Recognised rescue organisations, e.g. Surf rescue. Calling and working. Ship-ship and ship-shore.

Index

A

AC adaptors 111
Adaptor plugs audio/video/RF 212
Adaptor plugs computer 43
Adaptors audio/video 77
Adaptors travel 16
Adhesives 161
Aerial rods 218
Air duster 160
Air speed meter 184
Alarm accessories 98
Alarm cable 231
Alarm clocks 8,53,82
Alarm keypads 93
Alarm switches 100,211
Alarm systems 93
Alarms 93
Alarms car 99
Alignment tools 167
Allen keys 173
Aluminium solder 159
Amateur accessories 134-136
Amateur antennas 130
Amateur transceivers 123-124,126-127
Ammonium persulphate 161
Answering machines 9,12-13,18
Antenna mounts 135
Antenna tuners 125
Antennas amateur 130-131
Antennas car 63
Antennas CB 136-140
Antennas FM 89-90
Antennas marine 139
Antennas mobile phones 23
Antennas scanners 140
Antennas telephone 16
Antennas TV 89-90
Antennas TV accessories 91
Antennas UHF CB 139
Antennas VHF/UHF 131
Anti-static products 202
Appliance mains lead 232
Audio 70
Audio accessories 67,70-72
Audio adaptor cables 74
Audio adaptor plugs 77
Audio adaptors 212
Audio bags 58
Audio books 194
Audio cable 229
Audio cables 75
Audio car stereos 62
Audio speakers 63,72-73
Audio storage 58
Audio tapes 65
Audio transformers 112
Automotive accessories 183
Automotive kits 153
Automotive plugs & sockets 213
Automotive testers 182

B

Baby monitor 17
Balun formers 218
Balun kits 217
Baluns HF 129
Banana plugs & sockets 213
BASIC stamp kits 141
Bathroom radios 54
Batteries 101-103
Batteries mobile phones 22
Battery chargers 102,109,191
Battery holders 103
Battery testers 103,176
Bezels 216
Bike accessories 84
Bit sets 171
Blood pressure monitors 86
Blowtorches 162
Bookman cards 49
Books 194,196-197
Books audio 194
Books communications 198
Books computer games 194
Books computers 192-193,195
Books Discovery Series 196
Books electronic repairs 196
Books electronic theory 195
Books Funway 196
Books Internet 193
Books scanners & shortwave 197
Books speakers 194
Boxes metal 206-207
Boxes plastic 204-206
Brackets 199
Brackets speaker 64
Brackets TV 64
Breadboards 202-203
Breakout boxes 43
Burglar alarms 93-95
Butane refills 160
Butane soldering iron 162
Buzzers 98

C

Cable & wire 228-232
Cable accessories 201,231-232
Cable audio 229
Cable computer 231
Cable data 231
Cable glands 200
Cable intercom/alarm/phone 231
Cable tie gun 169
Cable ties 201
Cables audio & video 74-75
Cables computer 45
Cables microphones 76
Cables optical 75
Calculator batteries 101
Calculators 47-48
Caller ID 9-13
Callipers 167,184
Camcorder tapes 65
Cameras computer 29-30
Cameras digital 66
Cameras security 96-97
Cannon-style connectors 212
Capacitors 221-223,227
Car accessories 110
Car alarms 99
Car antennas 63
Car audio accessories 63
Car CD accessories 62
Car fuses 217
Car kits 153
Car security 99,153
Car stereos 62
Carry bags 175
Cartridges printer 32
Cases metal 207
Cases plastic 204-205
Cassette recorders 56-59,78
Cassette tapes 68-69
Cassettes micro 61
Cat 5 cable 231
Cat 5 leads 16,42
CB accessories 118-121,129,135-136
CB antennas 136-140
CB marine 114
CB power supplies 111,134
CB radios 118-122
CD accessories 69
CD cases 35
CD labelling system 41
CD players 57-58
CD storage 35,58
CD travel kit 56
CD-ROM cleaner 41,160
CD-ROM drives 29
CDR/CDRW disks 36
Cellular data products 22
Cellular phone accessories 21
Cellular phone batteries 22
Cellular phones 20
Central locking systems 99
Ceramic screwdrivers 167
Chargers 191
Chargers mobile phones 22
Charts 197
Chess sets 81
Chokes 218
Circuit breakers 217
Clamp meters 179
Clamps 167
Cleaning solvents 160
Clip leads 188
Clock radios 8,53,59,78
Clocks 83
Clockwork radios 55
Coax cable 228
Coax strippers 167
Coax switches 119,129
Coil formers 217
Communications accessories 125,129,136
Component packs 227
Computer accessories 41
Computer books 192-194
Computer cable 231
Computer cables 44-45
Computer cards 29
Computer drives 29
Computer joysticks 38
Computer keyboards 37
Computer media 36
Computer networking 42
Computer plugs & sockets 43,213-214
Computer printer accessories 32
Computer scanners 30
Computer service 36
Computer speakers 29
Computers 24-25
Computers Built To Order 25
Connectors 200
Connectors audio/video 77
Connectors networking 42
Contact cleaner 160
Continuity testers 187
Copper wire 232
Copy holder 41
Cordless phone antennas 16
Cordless phone batteries 103
Counter handheld 187
Crimp connectors 200
Crimp tools 168
CROs & probes 186
Crossover units 72
Crystal radio kit 144
Crystals 226
Cutting mat 161

D

Data cable 231
Databanks 50
DC power cable 230
DC power connectors 62
DC power supplies 111,134,185
Desktop chargers 22
Desoldering braid 159
Desoldering equipment 159,165-166
Dictating machines 60
Dictionary/Thesaurus 49
Diecast boxes 207
Digital cameras & accessories 66
Digital voice recorders 61
Dimmers 108
Diodes 224,227
DIP switches 211
Diplexers splitters 91
Discovery Series kits 145-146
Disk drive accessories 41,45
Disk storage 35
Diskette labels 40
Disks floppy 36
Door chimes 83,92
Double adaptors 105
Drill sets 172
Drive belts 202
Dummy loads HF 129
Dynamic microphones 76

E

Earpieces/earphones 70-71
Electret microphones 76
Electric fence equipment 185
Electric timers 104
Electrolytic capacitors 221-222
Electronics books 196
EMF meter 183
Encyclopeadias 27
Engine immobilisers 99
Engraving tool 172
EPIRB 117
EPROMs 226
Etch tank 161
Etching equipment 161
Extension cords 105
Extension reels phone 16

F

F-clamps 167
Fans 113
Fans personal 85
Fax accessories 19
Fax machines 18-19
Fax modems 28
Fax paper 19
Ferric chloride 161
Ferrite cores 217
Ferrites 218
FETs 223
Fibre optic cable 228
Files 173
Flashlights 87
Flood lamps 88
Floppy disks 36
Fluke accessories 182
Fluke equipment 180
Fluke products 181
Fluoro lights 191
FM radio antennas 89
Freezer spray 160
Fume extractor 165
Funway kits 142-144
Fuse wire 232
Fuseholders 217
Fuses 216-217

G

G-clamps 167
Gaffa tape 159
Games handheld 80
Gearboxes 215
Gender changers 43
Gift ideas 83-84,144,191
Glasses repair kit 170
Globes 88,215-216
Glue guns 164
Glues 161
GPS books 198
GPS equipment 117
Graphics tablets 39
Grease 160
Grommets 200
Guitars/toys 79

H

Hair clippers 85
Hairdryer 85
Halogen light sets 113
Ham books 198
Handheld games 80
Handsfree kits 23
Hardware 199-200
Headers 214
Headphone radio 78
Headphones 70-71
Headsets computer 29
Headsets Noisebuster 85
Headsets transceiver 128
Health products 86
Hearing aid batteries 101
Heat guns 164
Heat transfer compound 202
Heatshrink tubing 232
Heatsinks 208
HF transceivers 123-124
High voltage probes 182
Home security 93-95
Hook-up wire 228-229
Horn speakers 72

I

IC sockets 214
IC tools 173-174
ICs CMOS 225
ICs digital 226
ICs linear 224-226
ICs TTL 225
IDC cable 231
IDC connectors 214
IEC mains leads 232
IEC mains plugs & sockets 105
Ink cartridges 32-33
Ink jet refills 32
Insulation tape 159
Integrated circuits 224,226
Intercoms 17
Intercoms door 96
Internet 46
Internet books 193
Internet cards 28
Inverters 110
Iron on transfers 34

J

Joypads & joysticks 38
Joystick cables 44
Jug 85
Junction boxes 108

K

Key chain lights 87
Keyboard cleaner 41
Keyboard extension cables 45
Keyboard rest 40
Keyboards computer 37
Keyboards musical 79
Keypads 211
Kids' games 80
Kits 141-158
Kits audio 145-146,152,155-157
Kits automotive 153
Kits communications 158
Kits disco 151
Kits for kids 144
Kits Funway 142-143
Kits general 150-151
Kits Lego 147
Kits model trains 149
Kits motors 144
Kits power supplies 146,148-149,152
Kits radio 156,158
Kits radios 144
Kits security 152
Kits solar 191
Kits test gear 154
Kits video 157
Knives 168
Knobs 219

L

Label remover 161
Labelling machine 17
Laminators 17
Lamps 88,216
Language translators 49
Lantern batteries 102
Lanterns 87
Laser pointers 175
Laser toner 32
LCD panel meters 189
LCR multimeters 179
Learning aids 80
LED displays 226
LED packs 227
LEDs 226-227
Lego kits 147
Light dimmers 108
Light meter 183
Light switches 108
Lights halogen 113
Lights security 95
Line filters 105
Linear amplifiers 129
Lithium batteries 102
Logic probes 187

M

Magnets 202,211
Magnifiers 88,166,173-174
Mains accessories 105-108
Mains cable 230
Mains leads 232

Index

Mains plugs & sockets 107-108
Mains remote switches 107
Mains safety equipment 107
Mains timers 104
Marine CB antennas 139
Marine CBs 114
Masthead amps 91
Matrix boards 199,203
Media storage 35
Memory computer 42
Meter movements 189
Meters universal 189
Mice 39
Micro notetakers 60
Micro switches 211
Microphone accessories 76,214,230
Microphone cable 76,230
Microphone leads 76
Microphone plugs & sockets 214
Microphone stands 76
Microphones 76
Microwave leakage detectors 83
Mini disc recorder 57
Mini-disc tapes 68
Mixers 67
Mobile phone accessories 21,23
Mobile phone batteries 22
Mobile phone data 22
Mobile phones 20
Model train kits 149
Modems 28
Modular plugs 14
Monitor accessories 41,45
Morse accessories 125
MOSFETs 223
Motors DC 215
Mouse pads 40
Mouses 39
Multiband receivers 114-115
Multimeter accessories 188
Multimeter leads/probes 188
Multimeters 144,179
Multimeters analogue 176
Multimeters digital 176-178,180-182
Musical toys 79

N

Negative ion generator 86
Neons 215-216
Network cards 42
Networking accessories 42
Nibblers 173
NiCd batteries 102-103
NiCd chargers 191
NiCd/NiMH chargers 109
Night lights 107
Night viewers 97
NiMh batteries 102
Nintendo 64 books 194
Nippers 169
Noisebuster extreme headsets 85
Notetakers 57,59-61
Nuts and bolts 199

O

OFC cable 229-230
Optical cables 75
Opto devices 226
Organisers 50-52,61
Oscilloscopes 186
Outdoor speakers 72

P

Palm accessories 51
Palms 51
Panel meters 189
Paper 34
Paper shredders 17
Parts cabinets 206
PCB accessories 161
PCB pins 199
PCBs 203
PDAs 51-52
Pedometer 86
Pencil sharpener 84
Penlights 87
Personal alarms 92
Personal radios 54
Personal stereo kids 78
Personal stereos 54-57
Pest control 84
pH meter 184
Phone directories 26
Phones 8-13,18-19
Phones answering machines 12
Phones Caller ID 11
Phones cordless 11-12
Phones mobile 20
Photo-resist 161
Piggy back leads 105
Pilot globes 88
PIR detectors 92-93,95,100
Plant hygrometer 84
Pliers 167,169
Plugs & sockets 212-215
Portable stereos 58
Potentiometers 220
Power boards 105-106
Power filters 106
Power points 108
Power supplies 111,134,185
Pressure mats 100
Printer accessories 31-32
Printer cables 44-45
Printer calculators 47
Printer cartridges 32
Printer ink refills 33
Printer paper 35
Printer ribbons 32
Printers 31
Prototype boards 203

Q

Quick connectors 200

R

Rack equipment 206
Radio cassettes 56-59
Radio clocks 53
Radio headphone 78
Radios 54-59
Radios kids 78
Radios solar 191
RAM 226
Reamer 173
Receivers 114-115
Rectifiers 224,227
Reed Switches 211
Relays 218
Remote control cars 81
Remote controllers 65
Resistance wheels 187
Resistance wire 232
Resistors 221,227
RF chokes 218
RF plugs & sockets 213
Ribbon cable 228
Ribbons printer 32
Ring decoders 19
Rubber feet 201

S

Satellite navigation GPS 117
SAW resonators 224
Scales 83,86
Scanner antennas 140
Scanner frequency guides 197
Scanners 132
Scanners image 30
Scanning receivers 122,127,132-133
Scopemeters 180
Screen filters 41
Screwdrivers 167,170-172,187
Screws 199
SCRs 224
SCSI cables 45
Security 92-98
Security cameras 96-97
Security car 99
Security equipment 97
Security home 93
Security switches 100
Semiconductor data packs 197
Semiconductors 223-227
Serial cable accessories 43
Serial cables 44
Service aids 159-160,166-167,173-174
Shaver travel 85
Shortwave radio books 197
Shortwave receivers 114-115
Shredders 17
Shunt pack 189
Side-cutters 169
Signal generators 185
Sirens 93,98
SLA batteries 103
SLA battery chargers 109
Smoke detectors 95
Socket sets 171
Sockets & plugs 213-215
Software 26-27,29
Solar products 190-191
Solder 159
Solder removal 159
Soldering accessories 159-160,164-166
Soldering iron tips 162-164
Soldering irons 162-165
Solenoids 215
Sony Playstation books 194
Sound level meters 185
Spacers 199
Spaghetti 232
Spanners 167,172
Speaker accessories 64,72
Speaker cable 229
Speaker design 194
Speaker grille cloth 72
Speaker switch box 67
Speaker terminals 214
Speakerphones 12
Speakers 63-64,72-73
Speakers alarm 98
Speakers multimedia 64
Speakers outdoor 64,72
Spellcheckers 49
Splitters diplexers 91
Spray cans 160
Spring packs 202
Stationery 34
Step up/down transformers 104
Stopwatches 82
Storage equipment 206
Strippers 167
Strobe lights 98
Sub woofers 63
Surge protectors 16,106
Surveillance systems 96
Switch boxes 31,67
Switches 209-211
Switches push button 209-211
Switches rocker 211
Switches rotary 220
Switches slide 210
Switches toggle 209
Switches wall & light 108
SWR meters 134

T

Tag strips 214
Tantalum capacitors 222
Tape 159
Tape measure 184
Tapes audio/video 68-69
Tapes mini-disc 68
Telephones (see phones) 8-13,18-19
Telephone accessories 14-16
Telephone cable 231
Telephone extensions 16
Telephone leads 15
Telephone plugs & sockets 14-15
Telephone ring decoders 17
Telephone ringers 16
Test clips/leads 215
Test equipment 177,181-187
Thermal fuses 217
Thermocouples 183
Thermometers 83,86,183
Thermostats 211
Timers 83,104
Toner 32
Tool boxes 175,206
Tools 167-174
Toothbrushes 86
Torch globes 88
Torches 87,191
Toroidal transformers 113
Toroids 217
Toys & learning 79-81
Transceivers 120
Transceivers amateur 123-124,126-127
Transceivers CB 118-122
Transceivers HF 123-124
Transceivers marine 114
Transcription machines 60
Transformers 112-113
Transistor mounting access. 202,214
Transistors 223,227
Translators 49
Travel accessories 81,85
Travel adaptors 16,85
Travel adaptors/converters 104
Travel clocks 82
Travel hairdryer 85
TRIACs & SCRs 224
Trimcaps 223
Trimpots 220
Tubing & heatshrink 232
TV antenna accessories 91
TV antennas 89-90
TV brackets 64
TV cable 228
TV headphones 71
TV leads 74-75,91
TV plugs & sockets 77,91
TV reception guides 198
TVs 67
Tyre pressure gauge 83

U

UHF accessories 120
UHF CBs 120-122
UHF marine antennas 139
Uninterruptible power supplies 107
Universal meters 189
Universal remote controls 65
USB equipment 30,39
UV exposure box 161

V

Vacuum adaptor 167
Vacuum cleaners 174
Valve sockets 214
Varistors 223
VCR bracket 69
Velleman kits 147
Vices 168
Video adaptors 77,212
Video cables 74-75
Video camera batteries 102
Video door intercoms 96
Video tapes 68-69
Video transmitters 67
Virus software 27
Voice organisers 61
Voltage converters 110
Voltage probes 187
Voltage regulators 224

W

Walkie-talkies 81,119
Walkman 54,56-57
Wall clocks 82
Wallplates 14-15,77
Watch batteries 101
Watches 82
Water heater 85
Water timers 104
WD-40 160
Weather stations 116
Winding wire 232
Wire & cable 228-232
Wire-wrap sockets 214
Wire-wrap wire 232

X

Xenon trigger transformers 112
Xenon tubes 215

Y

Y2K software 26
Yaesu equipment 123-128

Z

Zeners 224
ZIP cases & storage 35
ZIP disks 36
ZIP drives 29
Zippy boxes 204

Data Section Index

555 Timer Guide 234
7-Segment Display Data 234
ASCII & Hex Codes 234
Battery Replacement Guide 233
Cannon-type Plug Connections 235
Capacitor Formulae 235
Capacitor Identification Guide 236
CB & Marine Frequencies 236
Component Identification 236
Computer Connections 236
Constants & Conversions 236
Decibels 236
DIN Connections 237
Diode Data 237
DTMF Encoders/Decoders 237
Electromagnetic Spectrum Guide 237
Electronic Formulae 237
FET & Power FET Data 237
Fuse Guide 238
Hex & ASCII Codes 238
Inductor Design & Formulae 239
Inductor Identification 239
Japanese Semiconductor Guide 240
LED Data & Guide 240
Mains Wiring 240
MOS Handling Precautions 241
NiCd Charger 241
Ohm's Law 241
Op-Amp Guide & Pinouts 241
Opto Device Data 241
Power MOSFET Guide 242
Preferred Values Guide 242
R 1797 NTC Thermistor 242
R 1802 Metal Oxide Varistor 243
R 1804 Gas HV Protective Device 243
Radio & TV Transmission Data 244
Reactance & Resonance 245
Resistor Colour Code 245
RF Plugs Wiring Guide 245
RMS Average & Peak 245
RS-232 Connection & Specs 245
SCART Connections 246
SCR Data 246
Semiconductor Outlines 247
Transistor Checking 249
Transistor Data 249
Triac Data 249
Trigger Device Data 247
Voltage Regulators Data & Guide 247
Wire & Cable Selection Guide 247
Wire & Coax Cable Specs. 249
Z 1956 IR Photo Diode 249
Z 2620 UGN3503 248
Z 3235 GaAs IR Diode 248
Z 4175 LCD Display 248
Z 4801 LDR 249
Z 5369 RS-232 Interface IC 250
Z 5380 2003 250
Z 5380/6282 Driver ICs 250
Z 6011 uPC 1688G 250
Z 6050/51 LM335, LM336 250
Z 6070 TDA2822 252
Z 6080 LM380 252
Z 6086 LM386 251
Z 6109 LM3909 251
Z 6115 LM1875 251
Z 6282 2803 251
Z 6362 LM723 251
Z 6525 414/484 TRF Radio 253
Z 6541/62 LM317 252
Z 6620 LM2941 253
Z 6810 LM334 253
Z 6830 TLC542C 254
Z 9125 1GHz Prescaler 254
Zener Diode Data 254

Terms & Conditions

Price Variation

The prices quoted in this catalogue will be current at the time of publication and will be valid from May 1 to September 1, 1999. Our best efforts will be made to hold these prices for the life of the catalogue. However, factors beyond our control (such as overseas exchange rates or sales tax increases) may increase costs and we reserve the right to increase prices accordingly.

Sales Tax Rate Change

Prices shown underlined in this catalogue attract wholesale sales tax at the highest current marginal tax rate. Legislation, which is now before the Australian Parliament, if passed, may alter this rate from July 1st 1999. Dick Smith Electronics will pass on the savings in Sales Tax it receives to our customers.

Prices for 10 Units

Where prices are shown for quantities of 10 units, they are for 10 units of the same item, and not for 10 mixed items.

Stock Availability

Based on consultation with our suppliers and our assessment of their capacity to supply at the quoted cost price and based also on our estimates of likely customer demand, we believe the products in this catalogue will be available from 1 May to 1 September, 1999. However, in some instances product may be available only in limited quantities, or may become unavailable due to circumstances over which we have no control. Accordingly, we cannot always guarantee the availability of product. In the event of this happening, we apologise for any inconvenience and where possible, will substitute a similar product of equal or better quality or provide you with a raincheck in accordance with our Raincheck Policy. In addition, not all products in this catalogue are available in all stores, but may be ordered. If you would like to check with us as to our current pricing or stock availability, please call your nearest store or stockist, as listed on pages 6 and 7.

Our 'Raincheck'

If your local Dick Smith Electronics store has sold out of a currently-advertised line, we will happily issue you a 'raincheck'.

As soon as new stock arrives, this assures you of being able to buy the original item (or a comparable product) at the advertised price - even if the original promotion has ended. Naturally, this cannot apply to items that have been advertised as 'limited', 'discontinued' or 'clearance' lines.

Warranty, Refund and Exchange

Shop with confidence with our 7-day money back guarantee (14 days for mail order customers). For 'Change of Mind' purchases, goods can only be accepted for refund or exchange in unmarked, original condition and packaging, complete with all instruction books, accessories, etc.

All returns and warranty repairs must be accompanied by your Sales Docket. Please note: Refunds on 'Change of Mind' purchases do not apply to books, batteries, semi-conductors, video games, computer software or contracted mobile phones.

Warranties

Our Voluntary Warranties

We provide our customers with a voluntary warranty on each product which is additional to the statutory warranties (warranties that are imposed by law) which have not been excluded by us pursuant to these terms. Our voluntary warranty does not limit those statutory warranties nor does it limit any rights that you may have against the manufacturer or importer of the product. Subject to those statutory warranties our liability is limited to our voluntary warranty. Our voluntary warranty is that a product will be free from defects in materials and workmanship for a period of 90 days from the date of purchase. Please appreciate that for some products, a longer warranty period may apply. Our sales staff will be happy to explain to you which goods carry a longer warranty. If defects arise during the warranty period, at our option, we will repair or replace the goods purchased or refund your money No liability for consequential loss is accepted in respect of our voluntary warranties.

Our liability under the voluntary warranty is subject to us being satisfied that a defect was caused by defective workmanship or materials and not by factors beyond our control. This includes, but is not limited to, defective installation, maintenance or repair, alteration or modification in a way not recommended by us, neglect, misuse and excessive use. Furthermore, we will not be liable for any damage to articles to which our products are attached or with which our products are used.

Service Under Warranty

Please keep your sales docket, including cash register receipt, in a safe place as the sales docket will become your guarantee card. If your purchase requires warranty service within the warranty period, you will be requested to produce your docket when returning the product under warranty for repair.

Statutory Warranties

Subject to the terms set out in the next paragraph, we exclude all the terms, conditions and warranties which are implied by statute or under general law in contracts for the supply of goods and services to the extent that it is permissible to exclude them. We point out the statutory warranties implied under Div.2 of Part V of the Trade Practices Act are not excluded if the goods are of a kind which are ordinarily acquired for personal, domestic or household use or consumption. Where the goods are of a kind which are not ordinarily acquired for personal, domestic or household use or consumption, our liability in respect of a breach of a warranty implied under Div.2 of Part V of the Trade Practices Act is limited to the replacement or repair of the goods or the payment by us of the cost of replacing the goods or of acquiring equivalent goods or of the cost of having the goods repaired.

Sales Tax

All prices shown in this catalogue include sales tax, where applicable. Goods can only be supplied less tax, if:

1. A sales tax number or exemption certification in the prescribed format is supplied on or with a written official order prior to goods being released; and/or
2. The goods are directly exported by us. For sales tax exemption, the minimum value of each item must be $10 with a minimum total order value of $50. For mail orders, the minimum total order value is $10.
3. From July 1 1999 it is expected that new rules will apply to tax free purchases of computer goods listed in Part 7A of the Sales Tax Assessment Act 1992

Our Wholesale Division will be pleased to advise you on large quantity purchases or purchases for re-sale. For enquires please refer to contact details on page 4.

Special Purchases

New items are continually being sourced and added to our range to cater for as-wide-a-range of needs as possible. A great deal of effort is put into searching for new products. For this reason, it is impossible for us to purchase special items for individual customers outside our normal range. However, each store maintains a 'products asked for' book and if demand is sufficient for any particular item, we will investigate the viability of stocking it in all stores.

Quotations

We do give written quotations if required. We must emphasise however, that prices are subject to confirmation at time of order. This is because there are many factors impacting on our prices that are beyond our control, and therefore beyond our responsibility.

Store Hours

Dick Smith Electronics stores open during normal trading hours including Saturdays. Some stores open on Sundays and public holidays. Please ring the store concerned for their particular hours.
(See pages 6 and 7).

Copyright

All material contained within this catalogue is copyright to Dick Smith Electronics except where credit is noted to other parties. Permission may be sought from Dick Smith Electronics to publish material from this catalogue and from third parties direct, where so noted.

Phone and Mail Orders

Order By Phone 24 Hours a day, 7 days per week

All Areas (Toll Free) 1300 366 644

Order By Fax	(02) 9395 1155
Order By email	directlink@dse.com.au
Order By Mail	Dick Smith Electronics, Direct Link Mail Orders Reply Paid 160, PO Box 321 North Ryde NSW 1670, (No postage stamp required)

An order form is also enclosed in the centre of this catalogue.

Catalogue Numbers

To minimise the chance of error in your order, please use the catalogue number as well as a description of the product.

Payments

Please send money orders or crossed cheques with your order. DO NOT SEND CASH through the post. Please make money orders and cheques payable to Dick Smith Electronics.

For your convenience, you can purchase through mail orders with your Master Card, Visa, Bankcard, American Express or Diners Club card. The minimum credit card purchase value is $10.

Minimum Mail Order

The minimum order amount is $10 unless otherwise set out in Special Offers through advertisements.

International Orders

We are happy to sell to overseas countries. Simply address your order to Dick Smith Electronics International Mail Orders at the address above or fax (61 2) 9395 1155. Where possible, we will deduct Australian Sales Tax (NB $10 minimum for sales tax exemption). On more expensive items, the savings in sales tax could mean the cost of freight is recovered. Remember, however, that you may have to pay customs and importing charges at your end (if applicable). We cannot supply full customs documentation, but all parcels include the required customs dockets.

We would also remind overseas customers that if, for any reason, goods are returned to us from overseas (eg. for service, etc) it is absolutely essential that customs documents are included. If they are not, it can be a very costly process to obtain customs clearance and this charge must be paid by the customer. Failure to include customs documents may also result in long delays.

Please note that Dick Smith Electronics cannot accept any responsibility or liability for the suitability of any product for use outside Australia, nor its compliance with local regulations.

Insurance

Risk in the goods passes to you when the goods leave our warehouse. Our order form allows you to elect to have the goods insured against loss in transit at your cost - otherwise loss of goods in transit is at your risk. This is subject to and does not limit any rights you may have against any party in relation to the carriage of the goods, such as any rights against the carrier.

Damaged Goods

All claims for damaged or missing goods in transit must be filed with the carrier concerned. This does not in any way limit any rights that you may otherwise have eg. against us under a warranty claim.

Back Orders

All goods in stock are despatched promptly. Goods out of stock are back ordered and sent later at our expense unless we advise otherwise. Back order prices are firm for 30 days from date of order. All back orders are despatched as soon as we receive the goods from our suppliers. When we send a copy of your order back to you, the delay times will be quoted, but because this information is given to us by our suppliers, we cannot guarantee their accuracy. Minimum back order value is $10.

Wholesale Division

Our Wholesale Division can offer extremely competitive prices on large quantities and bulk buys. If you have a project in mind, we will gladly provide a quote on large quantity purchases.

Please refer to the Wholesale Division contact information on page 4.

Any Problems?

We are particularly proud of the reputation our company has earned with electronics enthusiasts. The last thing we want is an unhappy customer. If there is something you do not like, or if you have any suggestions which may help us serve you better, please let us know. Every call or letter will receive personal attention. Because problems can be solved most quickly at local level, we suggest that our State Managers will be able to help you best. For contact details please see page 7.

Dick Smith Electronics Pty Ltd
ACN 000 908 716

DICK SMITH ELECTRONICS

That's where you go!

DICK SMITH ELECTRONICS

That's where you go!

www.dse.com.au

9 315999 073555

Print Post Approved: PP 255003/01508 Dick Smith Electronics Pty Limited ACN 000 908 716
Cnr Lane Cove & Waterloo Roads, North Ryde NSW 2113 Australia Tel: (02) 9937 3200 Fax: (02) 9888 3631